NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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SUGGESTED BY SEPTEMBER.

Autumn paints
Ausonian hills with grapes, whilst English plains
Blush with pomaceous harvests breathing sweets.

O let me now, when the kind early dew
Unlocks the embosomed odors, walk among
The well ranged files of trees, whose full-aged stores
Diffuse ambrosial streams, than myrrh or naiad
More grateful, or perfuming flowery bean.
Soft whispering airs, and the lark's matin song
These woo to musing, and becalm the mind
Perplexed with irksome thoughts. Thrice happy time,
Best portion of the various year, in which
Nature rejoiceth, smiling on her works
Lovely, to full perfection wrought.—*Phadips.*

It has been said that the farmer, like the manufacturer, pursues his business to earn a livelihood for himself and family, and to accumulate a small store for a rainy day. True. But, in the language of a late able writer, "Every farmer, great or small, is a manufacturer. In the manufactory which he superintends, is made butter, cheese, pork, beef, corn, potatoes—in fact, all the real necessaries of life." And then, as R. W. Emerson says, his servants are "Chemistry; the pure air; the water brook; the lightning; the cloud; the winds, that have blown an interminable succession of years before he was born; the sun, which has for ages soaked the earth with light and heat, melted the earths, decomposed the rocks, and covered them with frosts, and accumulated the stagnum which makes the heat of the meadow.'

The most successful farmer, now, is not the man who cultivates the greatest number of acres, but he who applies the most of thought to his business. The days of *routine* farming are, happily, closing, and the farmer who plods wearily on in the track of his predecessors, unmindful of the improvements, and disregardful of the capabilities of agriculture, is certain to be left behind. The great problem to be solved is, not how to produce large crops, but how to produce crops with the most profit; in other words, how to produce remunerating harvests without abstracting from the soil all the fertilizing particles which constitute its fertility and strength. What we want is to be able to produce the greatest possible product per acre, and still secure fertility to the soil, making poor land rich, or rich land richer, with the least possible outlay, or expenditure for labor and manure. This should be the chief aim of the farmer.

A *great* crop of corn or wheat may be an *unprofitable* one; it may not pay expenses, and leave the soil in a condition unable to supply aliment to a succeeding crop. It takes long to recuperate an exhausted soil, even under judicious and liberal management; it is like a diseased constitution in man. A piece of land affluent in the elements of fertility, giving a generous yield to toil, makes a happy and contented farmer. Such a one is certain of dividends when banks fail. "There are," says a late writer, "manifold details of husbandry which require forecast and reflection."

Now is the time to lay plans for the coming year, and for the distant future. He who does this, will manage with a grace, and become a wiser and better man. The present is a favorable season to initiate such a work. Most cultivators complain of a want of manure for their acres. They indulge in useless speculations as to the

wonders they could achieve if they only could command a sufficiency of the article. They have teams of oxen or horses which must be fed whether they are employed or suffered to remain idle. The present is a good time to employ them in forming compost heaps for farm use. On most farms, there are deposits of valuable muck, and the team may be profitably employed in drawing out and depositing this article in situations where it will be easily accessible when wanted for future use. The dry weather which we usually have during this delightful month, is peculiarly favorable to this operation, and the comparative leisure enjoyed seems to indicate it as the most appropriate opportunity that can be selected for the work. Good muck is a valuable article, and composts formed of it, are perhaps the best stimuli that can be applied to most crops—especially, on our sandy loam lands.

During this month the careful farmer will make proper preparations for the comfortable shelter of his domestic animals during the approaching winter. A much less quantity of food is required by a stock of animals if they enjoy a proper warmth —and dairy animals yield, it is said, about one-third more milk and butter.

Root-crops which have been kept clean during the season, are often neglected at this period of their growth, and suffered to become weedy. Go through the grounds carefully, and destroy every weed. It is bad policy, after having been to the expense of numerous hoeings, to permit the soil to become foul with spurious products which will mature their seeds, and render the land corrupt for many succeeding years.

Cellars should now be thoroughly ventilated and whitewashed, and the bins prepared for the reception of the several root-crops now rapidly verging to maturity in the fields. A cellar cumbered with rubbish and foul matter is not a proper place for the deposition of edibles of any description, while one that is clean and neatly kept is an interesting sight. Roots, cabbages, &c., in any considerable quantity, never should be kept in the cellar of the dwelling-house, as the odor arising from them soon pervades the rooms and renders the atmosphere impure and unhealthy.

Hogs intended for the meat tub, should now be put up to fatten. Keep them clean; feed liberally and regularly, and be careful to keep them warm and dry.

September is a proper month in which to turn in green crops by plowing. At this season of the year there is much green matter on the surface, which, if turned under by the plow, will supply a tolerably good dressing to the soil, and be a means of preparing it for the production of a crop of roots or grain.

Go through your cornfields as soon as the gleam of the golden grain can be seen through the opening husks, and select the largest and best formed ears for seed. In this way you may effect a most valuable improvement in the grain, and with very little trouble or expense.

BEAUTY OF MOSSES.

Lichen and mosses, though these last in their luxuriance are deep and rich as herbage, yet are for the most part of the humblest of the green things that live. Meek creatures, the first mercy of the earth, veiling with hushed softness its dintless rocks; creatures full of pity, covering with strange and tender honor the scarred disgrace of ruin, laying a quiet finger on the tumbling stones, to teach them rest. No words that I know of, will say what these mosses are. None are delicate enough, none perfect enough, none rich enough. How is one to tell of the rounded bosses of furred and beaming green, the starred divisions of rubied bloom, the traceries of intricate silver and fringes of amber, lustrous, arborescent, burnished through every fiber into a fitful brightness and glossy travesty of silken change, yet all subdued and pensive, and framed for sweetest offices of grace. They will not be gathered, like the flowers, for chaplet or love-token, but the wild bird will make his nest of them, and the weary child his pillow. And as the earth's first mercy, so are they its last gift to us. When all other service is vain from plant and tree, the soft mosses take up their watch by the head-stone. The woods, the blossoms, the gift-bearing grasses, have done their parts for a time, but these do service forever. Trees for the builder's yard, flowers for the bride's chamber, corn for the granary, moss for the grave. Yet as in one sense the humblest, in another they are the most honored of the earth-children. Unfading as motionless, the worm frets them not, and the autumn wastes not. Strong in lowliness, they neither blanch in heat nor pine in frost. Slow-fingered, constant-hearted, to them is entrusted the weaving of the dark, eternal tapestries of the hills; to them, slow-pencilled, iris-dyed, the tender framing of their endless imagery. Sharing the stillness of the unimpassioned rock, they share also its endurance; and while the winds of departing spring scatter the hawthorn blossoms like drifted snow, and summer dims on the parched meadow the drooping cowslip gold, far above, among the mountains, the silver lichen spots rest, star-like, on the stone, and the gathering orange stain on the edge of yonder western peak, reflects the sunsets of a thousand years.—*Ruskin.*

SKIMMING MILK.—Our women have a way of taking off the cream without the use of the skimmer. They use a knife only. They run the knife around the milk in the pan to separate the cream from the sides of the pan. Then they set the bottom of the milk-pan at the edge, on the rim of the cream-pan, then with the left hand elevate one side of the milk-pan so that the cream with the help of the knife in the right hand, will run off into the cream pan. After a little practice, it is done very quickly, and saves both time and cream.—*S. L. Wattles, in Country Gentleman.*

A TEN MILE ARMY OF ANTS,

AND THEIR EXPLOITS.

We take the following description of the "Bashikouay"—or reddish-brown African ant—from Du Chaillu's account of his African travels:

It is their habit to march through the forest in a long and regular line, about two inches broad and often ten miles in length. All along this line are larger ants, who act as officers, stand outside the ranks, and keep this singular army in order. If they come to a place where there are no trees to shelter them from the sun, whose heat they cannot bear, they immediately build underground tunnels, through which the whole army passes in columns to the forest beyond. These tunnels are four or five feet under ground, and are used only in the heat of the day or during a storm.

When they get hungry, the long file spreads itself through the forest in a front line, and devours all it comes to with a fury which is quite irresistible. The elephant and gorilla fly before this attack. The black men run for their lives. Every animal that lives in their line of march is chased. They seem to understand and act upon the tactics of Napoleon, and concentrate with great speed their heaviest forces upon the point of attack. In an incredibly short space of time the mouse, or dog, or leopard, or deer, is overwhelmed, killed, eaten, and the bare skeleton only remains.

They seem to travel night and day. Many a time have I been awakened out of a sleep, and obliged to rush from the hut and into the water to save my life, and after all suffered intolerable agony from the bites of the advance guard, who had got into my clothes. When they enter a house they clear it of all living things. Roaches are devoured in an instant, Rats and mice spring round the room in vain. An overwhelming force of ants kill a strong rat in less than a minute, in spite of the most frantic struggles, and in less than another minute its bones are stripped. Every living thing in the house is devoured. They will not touch vegetable matter. Thus they are in reality very useful (as well as dangerous) to the negroes, who have their huts cleaned of all the abounding vermin, such as immense roaches and centipedes, at least several times a year.

When on their march, the insect world flies before them, and I have often had the approach of a bashikouay army heralded to me by this means. Wherever they go they make a clean sweep, even ascending to the tops of the highest trees in pursuit of their prey. Their manner of attack is an impetuous *leap*. Instantly the strong pincers are fastened, and they only let go when the piece gives away. At such times this little animal seems animated by a kind of fury, which causes it to disregard entirely its own safety, and to seek only the conquest of its prey. The bite is very painful.

The negroes relate that criminals were in former times exposed in the path of the bashikouay ants, as the most cruel manner of putting to death.

Two very remarkable practices of theirs remain to be related. When, on their line of march, they must cross a stream, they throw themselves across and form a tunnel—a living tunnel—connecting two trees or high bushes on opposite sides of the little stream. This is done with great speed, and is effected by a great number of ants, each of which clings with its fore claws to its next neighbor's body or hind claws. Thus they form a high, safe tubular bridge, through which the whole vast regiment marches in regular order. If disturbed, or if the arch is broken by the violence of some animal, they instantly attack the offender with the greatest animosity.

The bashikouay have the sense of smell finely developed, as indeed have all the ants I know of, and they are guided very much by it. They are larger than any ant we have in America, being at least half an inch long, and are armed with very powerful fore legs and sharp jaws, with which they bite. They are red or dark brown in color. Their numbers are so great that one does not like to enter into calculations; but I have seen one continual line passing at good speed a particular place for twelve hours. The reader may imagine for himself how many millions on millions there may have been contained here.

THE BAROMETER.

Too much is usually expected from every thing new. The barometer has been much lauded of late, as a sure indicater of the state of the weather; but the farmer who places implicit reliance on its indications will surely be disappointed. To the farmer who is able to have one, I would say, buy it. It will prove a valuable aid to you in judging of the state of the weather. For several years I have watched its results with reference to the farmer, but my conclusions are somewhat different from those of published accounts. The following are a few of them.

If I see the barometer falling and the sky is overcast I do not expect good hay weather. Although it may not rain, it rarely clears away under such circumstances. If I see the barometer falling rapidly, I expect to see rain, or wind, or both. I saved a couple of tons of hay the last summer from a smart shower by a forewarning of this kind, besides notifying my nearest neighbor of the same thing.

When I see the barometer rising rapidly, no matter what the appearance of the sky may be, I am quite sure there will be no rain, and I can safely go to mowing in the shade of a thick cloud while my neighbors are in doubt. This I regard as the most valuable practical point to the farmer. On a lowering day the farmer knows that if he should mow down several tons of hay, he might lose many dollars by the operation But if it should clear away, his several tons of grass already mown will be in fine condition for the barn before another rain.

I have noticed showers when the barometer was high, without any change whatever. The farmer cannot expect a plow, however well constructed, to go without a team, nor must he expect too much from the barometer.—*Dr. True's Address.*

DRAINAGE.—The true principle of drainage is to get rid of stagnant water in the land at an expense consistent with the value of the land and the profits of husbandry.

For the New England Farmer.

ABOUT KEEPING "A CROWER."

MR. EDITOR:—I take peculiar pleasure in perusing the communications to your valuable paper, and am sometimes amused at the queer notions put forth in some of them. For instance, in a letter in the June number, signed "Warfield, Vt.," the writer states, "I do not keep a crower, as I save the cost of keep, and besides, what is a greater advantage, the hens may set several days longer on their eggs without spoiling them for use." What does he mean by the term "a crower?" Is it a crow of the comparative degree? Crow, crower, crowest—or is it an animal that crows and does nothing else? But joking aside, I cannot agree with "Warfield" at all, respecting the economy of not keeping a "crower." If the hens are not worth the cost of keeping a crower, besides their own keep, they are a poor set; besides, it is very ungenerous to deny them the pleasure of a companion, while the fancier takes all the eggs he can get from them.

The bird in question, call him what you may, is of great consequence in a hen-yard. He talks to the hens, helps them to select their nests, sympathizes with them in all their troubles, settles all their differences, calls them to breakfast and dinner, protects them from their enemies, &c. How is Warfield to keep up his stock or improve it? He must be totally dependent on some one else who is liberal enough to keep a crower, or else he will be in a bad fix. Again, as to the eggs keeping sound while sat upon. He must be a half-and-half hen fancier who does not take in the eggs every day. I never have any stolen nests in my establishment. I keep eleven hens and a crower, and can tell to which hen every egg belongs, when I take it from the nest; besides, I should like something more than mere assertion to convince me that a fertilized egg will not keep as well as the eggs from "Warfield's" hens. I would recommend him to get a crower and raise half a dozen pullets every summer in order that he may have a continuous yield of eggs, and be enabled to put away the old hens after they have passed their prime.

I would recommend the Black Hamburg as the best kind of fowls for general use, and they would suit "Warfield" to a nicety, as they never want to set. They are good layers, the eggs are nearly as large as those of the Black Spanish—and the fowls are handsome and well proportioned, not so long-legged as the Spanish. They have large rose combs which droop prettily on one side, and are hardy and easily kept. With these few remarks, I will close, hoping that the opinion that seems to prevail in the States, "that a crower ought not to crow," will shortly be exploded. COCK-A-DOODLE-DOO.

Halifax, N. S., July 8, 1861.

REMARKS ON CLIMATE.—The attention of the reader is called to an article on the subject of our climate, which may be found in another column of this number. To us, it is very interesting and instructive—and we call the attention of young persons especially to it, that they may see what a field of interest lies continually before them in this matter of the weather. If this article is carefully studied, it may excite a taste for further reading and investigation upon this important topic, and, with *some one*, may result in furnishing the world with a philosopher who shall prove a blessing to his race.

For the New England Farmer.

THE CAPITOL AT WASHINGTON.

All our readers will remember the vile letters that were sent from Washington some time ago, stating that our soldiers who were quartered in the Capitol were ravaging the rooms, defacing the pictures and statuary, and defiling the carpets. Our correspondent—whose place of business is in the Capitol—was passing a few days with us when these reports were received, and we requested him, upon his return, to write us the facts in the case, and his promise is fulfilled below—for which he will please accept our thanks. Our soldiers were sent, as he well says, to *protect* the Capitol, not to desecrate it, by destroying the rare works of genius and art which it has cost millions of treasure to supply. Such conduct would have been in keeping with the vandal spirit of the rebels, who have destroyed the most costly and useful works with ruthless and vandal hands. The persons who accused our soldiers of such wanton destruction are little better than the rebels who have occasioned the immense sacrifice of life and property which has already taken place.

Washington City, July 14, 1861.

MY DEAR BROWN:—You probably remember that when I last saw you at "River Cottage," I promised to write you on my return to this city, about matters and things here. Then, I supposed that I should do so immediately on my return, but alas! alas! humanity is prone to procrastinate; we think to-day that to-morrow, certainly, we *will* do this, or that, or the other thing. To-morrow comes, and it rains, or the weather is hot, or it is cold, or we don't feel exactly right, or—well, we may as well own up—a person who has no disposition to do a thing, who is, in fact, lazy, can always find plenty of excuses, and so "to-morrow, and to-morrow, and to-morrow" comes and goes, and the intended thing to be done, remains undone, perhaps forever. I do not, however, intend that the fulfilment of my promise to you shall be deferred quite to that extreme, and so, on this cold, cloudy, unpleasant morning, with the wind east, and the mercury at 62°, I sit down, in my *utter loneliness*, at my library-table, to endeavor to interest you, and perhaps your readers, for the space of fifteen minutes.

One of my promises, I remember, was that you should know *certainly* how much injury those pesky soldiers did to the Capitol, for there was no stint of disgusting description of the way they carried on in that stately edifice, where you and I have passed so many happy hours. One *lady*—I do not believe a lady ever wrote it, unless it were

a "French lady," like the redoubtable Col. Thomas, who performed that "brilliant *exploit*" of treason and piracy, by seizing the steamer St. Nicholas, and is now in durance vile, under the somewhat stern supervision of Gen. Banks—but it purports to be a lady—writes:

"The Northern press decline noticing the desecration of the Temple of Liberty, our Capitol! by their dirty, disgusting soldiery, who make a restaurant and sleeping-place of it, loll in its Senatorial seats, spit tobacco juice upon its superb carpets, deface its frescoed walls, and prick their bayonets by way of amusement in its magnificent paintings."

This, to be sure, was written for a Southern latitude. But even some of your Northern letter-writers did not scruple to talk of "the nails driven by the soldiers into the walls of the Halls of the Senate and House of Representatives," of the "piling up of greasy bacon hams on the superb carpets of the President's and Vice President's rooms," of the "breaking of the magnificent bronze railing of the private stairways for Senators and Representatives," &c., &c.

Now I know, from personal observation, that there is not one word of truth in any of these stories. The statuary and pictures were all covered, or cased, before a single company of soldiers entered the Capitol. The carpets were most all, if not all, taken up, and as for driving nails into the walls, let me remind those truthful writers who make such assertions, that they are entirely of *cast iron!* The magnificent railing—and it is magnificent—is *there*, as perfect as on the day it was put up. Not a picture, or piece of statuary received the least injury, and, this day, you cannot see, in any part of the building, the least indication that it was ever occupied by troops! It is really astonishing, considering that there were, at one time, thousands of men quartered in the Capitol, that so little injury was done, even to the furniture, which was necessarily in constant use day and night. The care of the soldiers of every thing, was most creditable to them, and I really believe they felt as much interest in preventing wanton or unnecessary injury, as if the property had actually been their own. They came here *voluntarily* to protect the Capital and Capitol, not to commit waste and to destroy. In my judgment that *lady's* description would be far more applicable to her friend Jeff's troops, than to our Northern heroes. So much for that vile slander, come from whence it may.

We have all along believed in ABRAHAM LINCOLN; but when we read his message, written by his own hand, out of his own noble head and heart, we all knew certain that the Lord had sent him here to do what he is now doing. He is the instrument in the hands of God, to crush out, *squash* out, overthrow and annihilate Southern traitors and treason, and Congress is nobly, most nobly backing him up. I have never felt so proud of my Yankee birthright, as I have since this unnatural, unholy war, was commenced in earnest, by the Southern traitors at Fort Sumter. The way the bone and sinew of the North and West, all Yankeedom in fact, have taken this matter in hand, is refreshing to a Union loving man of Yankee birth; and the unshaken determination that "Old Abe" shall be backed up till the last piece of hemp encircles the neck of the last traitor, is only a foreshadowing of the glorious salvation that awaits the thirty-four United States of America. The thing is to be put through, and no mistake.

There are those who think Gen. Scott is keeping the brakes down rather too hard. I have great faith in the Old Hero. I believe that he sees an obstruction on the track that is not visible to us passengers, and it is to prevent a smash-up, that he is delaying the train. But, mark my prediction, when the old General does whistle "up brakes," there will be such a rush forward, that secession will hardly be heard of again, this side of the Archangel's trumpet. My opinion is, that we had all better wait the veteran's motion—let the *great conductor* take the responsibility, and there will surely be no failure.

So confident are we all here of the eventual success of our cause, that we feel calm and cool. Washington was never less excited than at this time. To be sure, there are immense movements of troops, and at this moment a long train of army baggage-wagons is passing my house. One can scarcely move about the city without seeing regiment after regiment moving forward to the south side of the Potomac, and thousands of troops have passed my house within the past week. But all these movements are conducted with an order, and a quietness that astonishes everybody. Not a loud word is spoken, except the word of command as the glittering columns are required to change direction; cheerfulness, but *determination*, marks every countenance, and "we will conquer or die," may be read in the look and movement of every soldier, as plainly as if it were printed in twelve line pica all over him.

The military movements are such, across the river, as to give certain indications of either a battle, or a retreat by the rebels, soon. Our troops are moving forward, while theirs are retreating. It is expected that they will make a stand at Manassas, but they are so accustomed to *running*, that I am doubtful if they stop short of Cuba. You remember that I told you, two months ago, that I did not believe they had sufficient courage to stand up to a fair, open fight; that, if they could, by some sneaking, underhand, cowardly movement, murder a few of our men, without danger to themselves, they would do it. Thus far my opinion has been sustained by their contemptible action, and I am confirmed in what I said.

The country about Washington, in an agricultural and horticultural point of view, never looked more beautiful. The late abundant rains, following the hot weather, have enlivened every thing, and it is a luxury to ride about the vicinity. My garden, of which you know something, is as beautiful at this moment as possible. It would gladden your heart to look at it.

Ever faithfully, B. B. FRENCH.

Postscript.—The foregoing was written early this morning. Now it is evening, and since it was written, I have seen the glorious news of the great battle of yesterday at Beverly, Va., in which Gen. McClellan routed the chivalry entirely, killing large numbers, taking many prisoners, and a large quantity of munitions of war, and showing that when our armies do strike, they do it with effect. Gen. Scott knows what he is about.

About an hour ago, a regiment, splendidly appointed and equipped, marched by, with 29 large baggage-wagons, doubtless bound across the Long Bridge, to the "sacred soil," where, ere long, they will make the fur fly, or, more probably, the critters that wear it. B. B. F.

THE SEASON AND THE CROPS.

Our people are now, July 20th, in the midst of their haying, the dry weather having induced them to commence a little earlier than they otherwise would have done. The grass crop is very large, and a large portion of it has been secured in admirable condition during the clear, hot days of the last of June and nineteen days in July. The low ground meadows are also heavily clothed with grass, with a prospect of an opportunity of getting it, unless heavy and continued rains set in at once. Pastures have been excellent all through the early part of the season,—but a little parched with drought since July came in.

Up to July first, corn was backward, but all the time sustaining a good color and vigorous stalks, though quite low. The steady hot weather for the last twenty-two or three days has made a wonderful change in it—it seems almost magical. We have had hot nights as well as days, and the corn has more than doubled its height during the time mentioned above, and at the same time has preserved its dark green color and its proportionate breadth of stem. A moderate supply of rain, with continued hot weather through the remainder of July and the month of August, will make a heavy crop of this prime article.

We learn with some anxiety, however, that in certain places this crop has been attacked by the *army worm*. A gentleman from Plymouth county informs us that he had an acre and a half of wheat cut down by them in a *single night*, and that they then attacked his corn. A stalk of the corn brought by him is before us, and contains two or three of the worms who have made their way up the stem. This worm is exceedingly destructive, because it does not take a plant and feed upon its bulk, but merely eats across it, and when it falls to the ground passes to another, and so on through the field. This is the manner in which the wheat field was destroyed so rapidly.

The worms we found in this corn are not like the army worm which annually infest our apple trees, either in form or color. The regular army worm marches in close columns, side by side, touching each other, and devour every green thing they meet. It is this *platoon* movement, and the destructive power they possess, that has given them the appropriate name of army worm. We trust that this scourge will not become general in our now fair and promising fields.

The winter and spring grains appear well; the late drought has affected them in some degree, but there will be, we think, an average crop.

Potatoes have been affected by the dry weather, but the late rains will revive them, and as they have rooted deep in search of moisture, their growth will be all the more vigorous now.

Currants, raspberries, and some other small fruits, are not so abundant as they are in some seasons, but there will be a moderate supply. Of apples, pears and plums, there will be but a scanty crop.

Of the great staple crops, such as those upon which we must mainly rely for the sustenance of man and beast at home, and which we find it convenient to export when we have a surplus, there is now every promise of an abundant harvest.

Let us watch and tend them with judicious care, and then, whatever may be the issue, bow in grateful submission to Him who knows what is best, and who orders all things through an Infinite Wisdom that we can but imperfectly penetrate.

For the New England Farmer.

APPLE TREES.

I trim my apple trees in the spring after blossoming—just when they begin to grow rapidly. I am convinced that the scars will heal over sooner, if trimmed at that time, than if trimmed at any other time in the year. I begin to trim when the trees are very young, and trim them every year. In this way I am never under the necessity of cutting off large branches. Trees are always injured and often killed by cutting off the large branches that arise from the centre of the tree. One limb should never be permitted to rub another. If limbs do so, and both branches are equally healthy, I cut off that branch which originates farthest from the body of the tree. If taken in season and properly attended to, it is easy, by clipping only the small branches, to regulate the form of the tree and keep the branches clean and free.

Two years since, a young orchard came under my care, which had been very badly treated. The borers were killing the trees, and the owner did not know it. To make the trees bear, he had resorted to trimming, and sawed off valuable main branches. The borer had so reduced the vigor of the tree that the circulation was not driven to the ends of the branches, and a thick brush of thorny sprouts had started up over the body and the principal limbs. Many of the trees seemed ruined. I had them washed with weak lye to kill the lichens and the aphides. The borers were dug out, though it seemed to be cutting the tree into pieces. But now most of the borer scars are healed up, the sprouts are cleaned off, and the ends of the limbs are starting vigorously. It is beginning to be remarked that the trees "look handsome." Only three or four are hopeless. I keep out the borer by putting earth or ashes around the base of the tree—covering up the tender portion of the bark during the spring and summer months, from April to August. Ashes will not kill the borer after the egg has been laid.

I found borers this year in the bark three or four inches below the tops of the ashes. The ashes were put on too late last season. It is better to haul the earth away from the tree in the fall, and permit the bark to harden down to the root; for the insect which lays the egg cannot drive his ovipositor through hard bark. M.

Wilbraham, July, 1861.

REMARKS.—Treating trees from their youth as our correspondent does, all the pruning that is necessary—unless it be in case of accident—may be done at almost any time. Still, there is a principle underlying this matter. The tree has different conditions, in different seasons of the year, and some of those conditions are far more favorable for the operation of trimming, than others. The practice of our correspondent is admirable in most of the particulars which he has stated.

OUR FARMERS.

Their homes are their castles—their hearthstones a throne;
They rule without sceptre the kingdom they own;
The stalks and the vines and the fruit-bearing tree,
Are subjects that bend not to tyrants the knee;

But bend with the weight of the harvest and field,
Ever loyal and faithful, a harvest to yield.
No planning and plotting among them is known—
No traitor the sovereign would strike from his throne.

He stands, 'midst his acres of grass, wheat and maize,
Like Crusoe, "the monarch of all he surveys;"
His banks are the earth-banks that stand on his farm;
The banks that are safe when the panics alarm.

The STOCK is the cattle—not fancy in breed;
The SHARES are the plow-shares that score for the seed—
Not quoted on Change is the broker's array;
But shares on which Nature will dividends pay.

Their banks are not those which the widows condemn;
No officers pilfer deposits from them;
If small the potatoes that in them are found,
Yet none are so small as we find out of ground.

The farmer with appetite ever can eat
The bread on his table, "as good as the wheat;"
And, loving most dearly his wife he may utter,
"My bread and my wife! I'll not have any but her!"

With juice of the apple the wife then may fill
The glass in which linger no tremors or ill;
And she may respond that, whatever betide her,
Most happy she'll be with her husband beside her!

There's many a hearth where the embers are glowing;
There's many a heart with its joys overflowing;
The hearths and the hearts from the world's rude alarms,
Are safe in the homes that are reared on our farms.

MOWING MACHINES.—We recently had an opportunity of trying two leading mowing machines of the day, the *Buckeye* and the *Wood*. We have used them in thin and in heavy grass, and on rough and smooth land, and in every place they have given us great satisfaction. They are both excellent machines. Any person who purchases one, and uses it judiciously, may cut an acre very handsomely in an hour, with a one-horse machine. With a two-horse machine, on level land, and the long cutter-bar, he may cut an acre in forty minutes. They are well made, not liable to get out of order, and easily managed. A farmer who has twenty or twenty-five tons of hay to cut will not regret having purchased either of these machines. The Wood machine is for sale by *Nourse & Co.*, 34 Merchant's Row, and the Buckeye by *Parker, Gannett & Osgood*, 57 Blackstone Street.

For the New England Farmer.

HINTS FOR THE SEASON.

WEEDS.—These are likely to get the start of us during the hurry of the hay season, and the first opportunity should be improved to destroy them. This may be accomplished with the hoe when they are small, if the work is done in a clear, hot day, when the ground is dry; but otherwise, many will escape to seed the land for another crop of "tares," and although it is hard work, every weed remaining alive should be pulled out, and deposited in the hog-yard, not forgetting that those on the border of the field or in the edge of the grass will scatter seed just as surely as though growing in the centre of the field. In this way, a farm may soon be almost entirely cleared of many varieties of weeds, and all so much diminished as to save half the labor of hoeing after a few years. Weeds around barn-yards, &c., &c., will, of course, call for a share of attention.

CANADA THISTLES.—Much is said about cutting thistles before the seed ripens, which advice may be very good in some locations, but is of no practical value here, because there is so much seed ripened in waste places where it is altogether impracticable for a large farmer to attend to it, that there is always enough to come up in any place adapted to its growth. There is no difficulty, however, in eradicating them in pastures, by mowing when the first heads begin to ripen, and if done just before a rain, one mowing will frequently nearly finish them. On cultivated land they can be exterminated by cutting up with a hoe as often as they appear above the ground, in one season.

BASS MATTING.—This very convenient article for tying up plants and small trees, as well as for budding, may be readily obtained by peeling the bark from the bass or linden, in strips of suitable length for use, and keeping it under water until the layers will separate readily from each other. In very still water, the mucilage of the bark is liable to decay and cause an offensive smell, and in streams liable to floods, it is necessary to secure it thoroughly by placing stones upon it, or it may secede.

SEEDS.—Those who raise their own garden seeds, can improve the quality of carrot and parsnip seed by cutting off all the small clusters of blossoms, and beets by pinching off the ends of the shoots, as soon as sufficient length is grown, or when all the seed is formed which will ripen before frost; all the strength of the plant will then go to develop the remaining seed, and they will be larger and better filled.

WM. F. BASSETT.

Ashfield, July 14, 1861.

REARING POULTRY.

In a letter from a correspondent, some weeks since, we were requested to give the plan of a cheap and convenient poultry house, and to say something of its necessary surroundings. We reply with pleasure, as we believe the rearing of poultry on the farm is one of its most interesting items to every person of feeling and taste. Children find great pleasure in it, and, in its care, form habits of system, and learn to share the labors and responsibilities of life. Added to this, no item of the farm, where an equal amount is invested, affords so much profit. Then there is the convenience of having the nicest poultry and eggs for the table, just when they are wanted, or the equally high gratification of supplying friends from the surplus.

The plan of a poultry house, which we give above, is simple, and may be very cheaply constructed, as there is but little about it that most farmers cannot supply from their own farms. A small amount for glazing and hardware is all, and the rest is labor and lumber, the latter being the principal item of cost. The lumber may be cut from the farm forest, hauled to the mill, sawed and brought home in the winter, and the shingles may also be conveniently prepared by a great many farmers, with a trifling outlay only of money.

The building should be set but a short distance from the dwelling-house, so that it may be comfortably reached at all seasons of the year; but not so near as to mar the prospect, or disturb the family, in any sense. The internal arrangements may be as we have suggested, or they may be changed to suit the taste of the proprietor; but they should be so contrived as to give the fowls an opportunity to bathe in the sunshine in winter as much as possible. If this is done, they may often be found in groups, in the sunny places, enjoying themselves in the most satisfactory manner. This makes them bright, healthy, and constant layers, when other things are favorable. The roosts should be low, and easily reached, as well-fed hens, who are usually filled with eggs in different stages of growth, are often injured by getting down from high roosts.

The fowls should always have access, both summer and winter, to dry loam, sand, and wood-ashes, mixed, and to food of some kind, such as wheat, oats, barley, buckwheat, rye, mashed potatoes, mixed with a little lard, scraps of meat, and a feed once or twice a day of dry corn. If the latter is kept constantly before them, they reject the other grains for the corn, are apt to get very fat, and cease laying. In the summer they should always be able to reach the cool, moist earth, by scratching a little, and if they cannot pluck grass or other vegetables for themselves, they should be fed to them. A cheap and easy mode of doing this, is to sow lettuce in any of the spare places in the garden, by the walks, in the corners, or along the outside rows of the corn-field, and when it gets two or three inches above the ground, feed it out. There are few things that fowls are more fond of. They must have vegetables in some form, in order to make them profitable.

A liberal range for the fowls, in a yard where there is shade and pure water, is of great importance. They must also be supplied with lime and gravel in some form. Old mortar, coarse sand, and bones, pounded into small pieces, should be frequently, if not always, before them.

When these things which we have suggested, are supplied, fowls are not discontented in confinement, but will crow and cackle their gratitude, and make the morning joyous with their cheerful music, and we believe will afford a larger profit than when running at large, unless it be on farms where there is a considerable dropping of grain in the fields, or about the buildings.

The house may be large or small, according to one's wants; but one eight feet wide by twelve in length, and eight or ten feet high, will accommodate from 20 to 30 fowls.

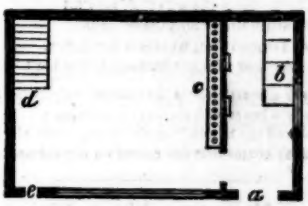

Figure 1, is a perspective view. Figure 2, is the ground plan; *a*, is the door-way; *b*, the grain-chests; *c*, the feeding-boxes; *d*, the stairway to the loft, and *e*, a small opening for the fowls to pass in and out.

GIVE THE CHILDREN FRESH AIR.—Some parents make the mistake of keeping their children in doors during cold weather. Such a practice is pernicious in many respects. It enfeebles the

bodies of children, and renders them peculiarly liable to be attacked by colds and coughs. A child should have its feet well shod with socks and boots, its body well wrapped in warm clothing, its head and ears securely protected from the cold, and then let loose to play in the bracing winter air. By this means its body will become robust, and its spirits be kept bright and cheerful; whereas, if a child be shut up in the house, it will become fretful and feverish, and perhaps wind up with an attack of illness. The coroner's inquests in London show that every week, in that city, children are suffocated in bed, or under the shawls of mothers. They die in consequence of inhaling their own breath, which is a compound of carbonic acid gas. They are, in fact, in the same situation as a person who is locked up in a room which is full of the fumes of charcoal. The children are gradually overpowered by the deleterious atmosphere, and die without a struggle, it being thought they were in a sound sleep.—*Scientific American.*

DISSOLVING BONES.

We are told from all quarters that bones which are by some means converted into a powder or paste are excellent for nearly all the plants we cultivate. The chemist tells us so, and gives us the reason for his opinion; while the observing farmer, who has used them on his growing crops, leaving a portion of them, side by side, without the bone, assures us that the superior growth and weight of seed where bone dust is applied, is too obvious to leave any room for doubt. It is said, also, that the animals fed upon herbage where bone in some form is applied, are more healthy, grow faster and yield larger products in milk, butter and cheese, than on those farms that have long been cropt without the use of bone.

If such is the case, it is well worth the attention of the farmer to save and secure all the bones he can, and convert them into a fertilizer in one form or another. If he but commences saving, he will be surprised at the amount collected in the course of the year, especially if he have an old horse to compost during the time. In order to make the saving certain, there must be a specific vessel in which to deposit them, such as a barrel or box of sufficient size, which should always stand in some convenient place. When thus collected, the question arises, how they may best be reduced to the form of powder or paste, so that they may be evenly applied to the soil.

In former years we have given the modes practiced to dissolve bones by the use of sulphuric acid, commonly called oil of vitriol. But as the acid is high, and there is some danger of accidents in its use, some other mode is preferable. We have also given a mode of producing the desired result by bedding the bones in horse manure—but that process is a tedious one, and few, we fear, will avail themselves of its use.

In a recent number of the *Country Gentleman*, a writer over the signature of "A. R. A.," introduces a new mode which is at once simple and cheap, and which, if effectual, is a valuable one. It consists in "putting the bones through a process of fermentation." We give it below as he states it, intending to employ it on the bones we have now collected, and will then state to the reader the result—whether favorable or not. He says:—

"To a ton of crushed or ground bones, add two to four cwt. of common salt, and enough of hot water or urine or liquid manure of any kind to wet or dampen thoroughly the whole mass; mix thoroughly, and then cover up the whole heap with dried muck, charcoal dust, sawdust, sods, or common soil. The heap will soon become warm and ferment; and after several weeks will be fit for application in the same way, and in about the same doses, as ordinary superphosphates or bones dissolved by the agency of sulphuric acid. Of bones thus prepared the *North British Agriculturist* says: 'Bones fermented by adding liquid manure or hot water with a portion of salt, are manurially of about equal value, weight for weight, with those treated by sulphuric acid.' As sulphuric acid is, at present, higher in price than formerly, and as there is always liability to accidents and injuries to both the clothing and the body of persons handling this strong acid, the process of dissolving by fermentation is at once more safe and more economical than dissolving by acid."

SALT FOR THE THROAT.

In these days when diseases of the throat are so universally prevalent, and so many cases are fatal, we feel it our duty to say a word in behalf of a simple, and what has been with us a most effectual preventive, if not a positive cure, of sore throat. For many years past, indeed, we may say during the whole of a life of more than forty years, we have been subject to sore throat, and more particularly to a dry, hacking cough, which was not only distressing to ourselves, but to our friends and those with whom we were brought into business contact. Last fall we were induced to try what virtue there was in common salt. We commenced by using it three times a day, morning, noon and night. We dissolved a large table-spoonful of pure table salt in about half a tumbler full of cold water. With this we gargled the throat most thoroughly just before meal time. The result has been that during the entire winter we were not only free from the usual coughs and colds to which, as far as our memory extends, we have always been subjected, but the dry, hacking cough has entirely disappeared. We attribute these satisfactory results solely to the use of the salt gargle, and do most cordially recommend a trial of it to those of our readers who are subject to diseases of the throat.

Many persons who have never tried the salt gargle, have the impression that it is unpleasant. Such is not the case. On the contrary it is pleasant, and after a few days' use, no person who loves a clean mouth, and a first-rate sharpener of the appetite, will abandon it.—*Far. and Gard.*

PRESERVING FRUITS.

Great improvements have of late been made in the art of preserving fruits for family use, by the introduction of jars which can be hermetically sealed. The process of preserving is so simple that every housekeeper can accomplish it, the only secret of success being that the fruit should be put up and sealed when hot, the jars being filled to the brim. The best jars for this purpose are those which are made entirely of glass. These will pay for themselves in a year or two, as fruit which is sealed so as to exclude the air may be preserved with one-quarter the amount of sugar required in the old process, and retains its original flavor better.

The following directions for preserving in hermetically sealed jars will be interesting to housekeepers at the present time:

Select only good fresh fruit or vegetables. Stale and fermented articles can never be preserved nor the decay already commenced arrested. Be particular and know to a certainty that your articles are fresh. No vegetables except tomatoes can be procured in the markets of large cities fresh enough for preserving.

Blackberries, Raspberries and Strawberries.—Use from a quarter to a half pound of sugar to a pound of fruit. Sugar the strawberries, and let them stand for half an hour, then put the syrup which will be formed by the juice and sugar into a preserving kettle, and boil it as long as any scum arises, and then put in the strawberries and boil until they are thoroughly heated through.

Fill the jars after first warming them in some way, and close immediately while the contents are hot.

Cherries and Blackberries.—Stew with or without sugar ten minutes, and seal up while boiling hot.

Gooseberries.—These can be kept by putting them into jars as they come from the bushes and sealing them up. Wash and pick them when wanted.

Currants.—Heat to boiling point with sugar, and seal up boiling hot.

Plums.—Make a syrup, using about half a pound of sugar to a pound of fruit. Boil the plums in this syrup until the fruit is tender; then fill the jars, and close up while hot.

Peaches.—Pare and cut out the peaches. Make a syrup using from a quarter to an half pound of sugar to a pound of fruit. Boil the syrup five or ten minutes; then put in the peaches and boil until they are thoroughly heated through; be sure that the fruit is all well heated, and then fill the jars and close immediately.

Quinces.—Peel and quarter them, and boil in water until tender, then do them in the same way as peaches.

Pears.—Same as quinces, except that they require less sugar.

Apples.—Pare, quarter and boil until tender, but not long enough to break in pieces; then add as much sugar as will sweeten to the taste, and let the whole boil two or three minutes. While hot pour into jars and close up.

Tomatoes.—Take off the skin and boil them one hour, or cook them sufficiently for the table. Season to the taste, fill the jars and close up boiling hot. These being a very juicy article, require much longer boiling than most other things to boil the water away.

If the above proportion of sugar makes the fruit sweeter than is desirable, it can be kept with rather less, but green fruit requires more than ripe.

For the New England Farmer.

LEGHORN HENS.

Among the great variety of domestic fowls kept for their good laying propensities in the egg line, I think that the Leghorn fowls deserve the highest commendation. For the benefit of the public, I will now give you a little experience of my own. A year ago the fore part of last June, I procured one dozen of eggs of Mr. Levi R. Hewins, of Foxboro', who lived a little more than one and a half miles from the centre of the town towards Walpole. The chickens hatched the last of June, and the pullets commenced laying when 4½ months old, which was in November. They have continued to lay constantly every day since, with the exception of some cold days last winter, they being kept in a place not very warm. They have shown no disposition whatever to set. This makes nearly eight months during which they have continued to lay their eggs.

My Leghorn hens are entirely white. Some of the breed, I find, are of other colors. They are not large fowls, but considerably larger than the Black Spanish, and their flesh is far superior to the latter fowl for their eating qualities. I have been troubled with the propensity in most other fowls of wanting to set, perhaps as often as once a month, summer and winter, which would take a week or ten days to break up so as to have them commence laying again. So strong is their propensity to set that they will set on nothing, expecting, I suppose, to hatch out something.

A writer in the *Farmer* recommends to shut up setting hens in a coop for three days without anything to eat. I have tried it, and think it the best way to deal with them, as when let out at large, their anxiety to obtain something to eat overcome their desire to set any longer. I write this, not for any pecuniary benefit, as I have none of these fowls to sell, but for the purpose of attracting public attention more to the subject.

Mansfield, July 15, 1861. ISAAC STEARNS.

FATTENING SWINE.

Many persons feed their swine sparingly all through their lives until within two or three months of the time of slaughtering, thinking this process an economical one. Is it so? Is it a natural process?

If the farmer's swine are fed at a loss, he had better sell his grain and purchase his pork. But this is never necessary, if he will feed regularly and liberally, and not postpone the fattening process until the animal is old enough to be slaughtered. The rule should be to keep the animal *always* in a thrifty and growing condition, and as the season of cold weather approaches, let the food be of a more concentrated nature, and as

much of it given as will be eaten with a good appetite. Under this process we believe that pork may be profitably raised by paying eighty cents, and perhaps one dollar per bushel, for a considerable portion of the food which the animals are to eat. They must be kept dry and warm in winter, and cool, with a moist place to go to, in summer.

For the New England Farmer.

REMARKS ON CLIMATE.

Mr. Editor:—I have been much interested in reading several articles in the *Farmer* within the past year on climate. In the *Farmer* of Dec. 15th, I find an article entitled "Some remarkable facts in relation to climate, compiled from Meyen," in which the writer gives many interesting facts concerning the variations of climate, but does not trace those facts to their primary causes. It is a well known fact that the eastern parts of continents are colder than their western parts in the northern hemisphere, but the result is partially reversed in the southern. All these are the effects of natural causes, and can be philosophically explained, and made clear to the human understanding. The primary cause of differences in climate consists in the configuration of continents, islands and seas. But the cause of all climate lies in two substances which envelop the earth, viz.: air and water, modified by the rays of the sun, the great producer of activity in these elements. It is by a complication of causes, acting upon these two substances, that such an extreme variety of climate is produced. Were the whole surface of our globe level, and of equal color and density, whether it consisted of earth or water, it would present us with a climate uniform in its character, and all isothermal lines would correspond with the parallels of latitude. But this is not so. Our globe is broken, and some parts are thrown up to a great height, while other parts are sunk to corresponding depths, and the ocean levels up nearly two-thirds of the surface of the globe with a vast body of water. Beneath this body of water, the floor of the ocean is as uneven as the land above the ocean, and like it produces a striking effect on climate. To describe this great regulator of climate, with perfect accuracy, requires a geographical knowledge of the whole bottom of the ocean, as well as the land—a knowledge which is but imperceptibly possessed by the human race. Yet the very superficial knowledge which we do possess enables us in a measure to unfold the mysteries of nature to a very great extent, and show their effects on the various parts of the globe.

The rays of the sun, that great motive power of earth, produces currents in the ocean as well as in the air, to an unlimited extent. These oceanic currents have definite bounds, while the surface of the earth remains unchanged, always running in the same courses through the great waste of waters, and forever producing the same effects on the land. These currents are deflected from their regular courses by the continents, and thrown into distant regions of the earth, far from their natural courses. The cause of all these currents in air or ocean lies in the sun. The direct rays of the sun, on entering our atmosphere vertically at the equator, produce an attraction or expansion of all substances coming within their influence, and permeate all substances with heat, especially at the surface of the earth, consequently making them lighter. For it is a well known fact that heat expands nearly all substances, and by heating the waters of the ocean it gives the atoms a tendency to rise and flow off in the direction of their motive power—the sun. Were there no impediment, this would cause a universal current from east to west, and a rising of the waters at the equator. These waters as they flow westwardly are deflected by the eastern shores of the continents, and sent off towards the polar regions, to modify the climates of the colder parts of the earth. Thus there is a great current that flows around the earth from east to west, which has neither beginning nor end, but is an everlasting circle or motion in the watery element.

Suppose we begin to trace this current from the western shore of Africa. It passes along the equator in a peaceful and undisturbed manner, until it comes in contact with the eastern shore of South America, at a point where its main current is deflected northward, where it passes onward through the Caribbean Sea and enters the Gulf of Mexico. Here is the great heating cauldron of tropical waters, giving life and fertility to the surrounding countries. Here it meets with an impassable barrier to its western progress in the high lands of Mexico. By the rush of waters into this basin they are consequently forced outward, after going the circuit of the gulf, and the only channel for its outlet is between the Florida Reefs and Cuba. It is then deflected northward by that high range of oceanic mountains of which the Bahama Isles are the summits. It now assumes the name of the Gulf Stream, and passes between the United States coast and a range of oceanic mountains, which raise their lofty summits above the waters, and form the Bermuda Isles.

It seems by the Report of the Superintendent of the United States Coast Survey, for 1859, that there is a ridge in the bottom of the ocean, from Cape Florida to Bemini, being a continuation of the mountains forming the Bahama Isles, and extending to the peninsula of Florida, having a depth of 350 fathoms, over which the Gulf Stream passes in its onward course. At this place the bottom shows an unevenness in form, over which, in the deep corrugations, the cold polar current passes beneath the hot waters of the Gulf Stream, and even this cold water is traced as far as the Tortugas; but is everywhere overflowed by the hot waters of the Gulf. At the Sambrero Station, it is strongly marked at depths varying from 70 to 100 fathoms. From Cape Florida, the bottom gradually sinks southwardly to 800 fathoms, five miles off Havana. The Gulf Stream, as it passes to the north, recedes gradually from the coasts, until it is further deflected by the Banks of Newfoundland. East of this, a branch crosses the ocean, and passes down the western coast of Africa, again to join the current of the tropical waters, and perform the same revolution over again. Within the circuit of this current lies the Sargasso Sea—that great floating meadow of seaweeds which so vividly occupied the imagination of Christopher Columbus, before his discovery of

the New World. It appears to be a large tract of oceanic table-land, over which the currents of the ocean never pass. The Gulf Stream, or its main branch, passes up the coast of the British Isles, and the western shore of Norway, giving those countries much more heat than is due to that latitude. It is then deflected by oceanic mountains, which are a continuation of the Ural Mountains through Nova Zembla, into the polar basins. It passes a little east of Spitzbergen, and flows on, mingling its waters with the cold waters of the polar basin, till it passes around the north cape of Greenland, forming the open polar sea, as seen by Dr. Kane's men, then passing through Smith's Sound into Baffin's Bay, it finds its way back, along the shores of the United States, as a cold current between the Gulf Stream and the land; and finally becomes submerged beneath the hot waters of the Gulf Stream. It passes along till it finally loses itself in the hot waters of the Gulf of Mexico. This current has a cooling effect on the eastern shores of our continent, giving New York the mean annual temperature of Dublin, which is nearly 13° further north. These currents have an effect on the climate of both shores of the Atlantic. A small branch of the great tropical current is deflected by the South American continent southward. It passes along the coast, and through the Straits of Magellan, where it turns to the north, drawn again by the sun's rays till it reaches the Bay of Arica, where it is deflected to the north-west until it arrives at the equatorial regions, and assists in forming the great westerly current of the Pacific. A branch of this current is deflected northwardly by high oceanic mountains, which rear their lofty summits above the waters of the ocean, and form that great archipelago of islands known as Polynesia and Australasia. This range of mountains appears to be a continuation of the great mountain chains of Central Asia, sunk beneath the waters of the ocean. This current passes up the eastern shore of Asia, partially enters the sea of Kamtschatka, and a small portion passes through Bhering's Straits into the Arctic Ocean, on the eastern side; yet the main current passes down the western coast of America, giving to California a most salubrious climate. It passes along the coast, until it mingles again with the great tropical current of the Pacific. A southern, or principal branch, of this current passes the Isles of Borneo and Sumatra, and enters the Indian Ocean on its way to the African continent, where it is again deflected from its course, and passes southward to the Cape of Good Hope, and then follows the coast of Africa to mingle with the equatorial current on its passage to the Gulf of Mexico.

A fitful current of cold water, passes from the Arctic Ocean through the west side of Bhering's Strait, down the eastern coast of Asia, to mingle again with the waters of the equatorial current; having an effect similar to the cold current on the eastern shore of America. These currents have an effect on climate by warming or cooling the air, as it comes in contact with the water.

The temperature of climate lies in the air, but is affected by almost all substances with which it comes in contact. Air, by passing over water, accumulates heat, but by passing to a great extent over land, loses its heat. This is one reason that the western coasts in the northern temperate zone are warmer than the eastern. The air, in passing over the Rocky Mountains and the broad prairies of western America, becomes cool, because it ascends to great heights as it passes over ridge after ridge of the Rocky Mountains, to a great distance; and after leaving the mountain regions it passes over land instead of water, where it cannot accumulate heat, but passes as a cold current to the shores of the Atlantic. The great lakes modify the air to a small extent around them, but have little or no effect as far east as the New England States.

Oceanic currents have an effect on climate, by warming the air as it comes in contact with the water. The air performs similar evolutions to those of the water, but is not so totally impeded in its course by continents or mountain chains, for its elastic force will enable it to pass over mountain chains of immense height; yet there are mountains high enough to impede its progress to a considerable extent. Although it passes over the Andes, Himalayas, and other lofty mountains to a great extent, yet all these mountains have an influence to impede its progress, and turn it from its direct course, which causes great discrepancies in climate.

The natural course of the air is similar to that of the water. The heat of the sun draws the air from each side of the equator, and forms a current from east to west within the tropics, aided by the centrifugal force of the earth. The current, as it recedes from the sun's path, blows from the north of east on the north side, and south of east on the south side, thus rising in a belt at the equator. The upper portion of this air, in consequence of its expansion, will necessarily flow off to the north and south, from the centre of the sun's track, because by becoming colder, and losing its moisture, it acquires more weight, and will come back to earth at some place between the tropics and the poles, or at all places. It forms a westerly current as it passes over our continent from about 33° to about 56° latitude, while on the eastern continent it is driven further north by the southerly winds drawn by the Himalaya mountains from the Indian Ocean. In Asia, this belt extends from 43 to 67° north latitude. This is called, by meteorologists, the belt of westerly winds. North of this, the wind assumes a more northerly direction, until the entire remainder of the air sinks at the pole, forming a northerly wind. This is a general description of the currents of air in the upper regions. In the lower regions, the air is deflected into valleys by mountain chains and other causes, so that the general circulation of the air is not wholly applicable to the earth's surface. But here the air obeys the same laws that water does, and is deflected at times from the equatorial regions toward the poles, till the cold polar current rolls back its tide of chilly winds to the tropical regions.

A FINE HORSE RAKE.—We have been using for a few days, *Stoddard's Self-Operating Horse Rake and Cocker*, and find it to entirely surpass every other Horse Rake that we have used. The rake is a decided success. We hope the inventor will sell ten thousand of them, at a fair price, and have little doubt that he will. A child of six

years has sufficient power to operate it, if he knew how to apply it. At a future time we shall make further notice of it.

EXTRACTS AND REPLIES.

HOW TO BRING MILK FROM A CLOSED TEAT—HAYING—CROPS.

I wish to make a suggestion to your Pennsylvania correspondent. When I was a lad, my father had an excellent cow, and one spring when she had been dry through a cold winter, we found it almost impossible to get any milk from one teat. I think he first worked a fine knitting-needle into the orifice in the teat and afterwards the quill end of a hen's feather, after cutting off most of the feather end, and winding a waxed thread firmly round to prevent it from slipping in too far; by keeping this in a few days except while milking, the difficulty was removed. I had occasion to try the same process last winter, and only had to keep the quill in one night and one day.

We were just going at haying this morning in good earnest, but the weather is wet; still it is a good day for mowing, and as most of us have to use the scythe yet, we have not been idle; grass is good; grain bids fair to be an average crop.

W. I. SIMONDS.

Roxbury, Vt., July 15, 1861.

SHEEP—PLOWS—CRANBERRIES.

I make the following inquiries, hoping you will answer all of them. I am also very desirous that they be answered by others—farmers of experience. Many who are silent could give much valuable information.

What sheep are most profitable to raise on sandy loam lands in the neighborhood of a good mutton and lamb market? Information in regard to price after shearing, with location, would be acceptable. How many of the kind mentioned will consume the feed of one cow? (1.)

For land as above, what kind and size of plow is the best—a plow to be drawn by oxen or two horses? (2.)

Would such kind of land be benefited by subsoil plowing? (3.)

What is the price of subsoil plows? (4.)

I have a few acres of swale meadow upon which cranberries are scattered here and there. Good English hay once grew upon it, but from neglect the surface drains have become clogged, and now only fresh meadow grass and cranberries grow. I can flow it for cranberries, or drain it and thereby make a valuable meadow. Which would you advise to be done? The sod is black and tough, filled with strong grass roots; underneath is a whitish sand. The land is dry enough in a dry time to plow. It used to bring very heavy grass of good quality. Any suggestions relative to its treatment will be very acceptable. (5.)

I have an abundance of easy land to work, but I think this the strongest, and am determined to reclaim it in some way, so as to make it pay.

New Bedford, 1861. G. W. H.

REMARKS.—(1.) There is no person in our recollection better able to give definite and reliable opinions in this matter than JOHN D. G. WILLIAMS, Esq., of Raynham, Mass. He was a member of our Legislature in 1859, and at the agricultural meetings at the State House, during that winter, spoke upon the subject of sheep culture, and showed that by figures and observation combined, he had gathered much valuable information on this subject. We hope he will reply to the queries of our correspondent.

(2.) Plow number 71½, Nourse, Mason & Co.'s pattern, would be an excellent one for the land you describe.

(3.) Subsoiling such land would undoubtedly be useful.

(4.) Send for a catalogue, which will be sent free of charge, and then you will find, not only prices of implements, but illustrations of them.

(5.) As the cranberry crop, when successfully cultivated, is a very profitable one, we should advise you to plant cranberry vines on one or two square rods of this land, and if they succeed well gradually extend them over the piece. Take thrifty vines from some meadow, and set them in holes prepared in the grass as near as six inches to each other.

It was too late to send the scions called for in another note; but they will be furnished next winter or spring, if wanted.

A BIG WORM.

I discovered the curious worm which accompanies this letter, on my grape vine in Charlestown, and as I can find no one who seems to know its name or nature, I submit it to your inspection; perhaps it is the "army-worm" whose recent appearance in New England has been noticed in the daily journals. WM. L. WILLIAMS.

Boston, July 20, 1861.

REMARKS.—The worm you kindly sent us, so nicely boxed, is not the "army worm," nor do we know its name and habits. It evidently belongs to the family of those that feed upon the carrot and parsnip. When the new edition of "Harris' Insects" is out, we hope to be able, by the aid of the engravings, to decide upon the names of many of the insects sent us.

CUTTER'S SEEDLING STRAWBERRY.

Will you inform me, through the *Farmer*, in what respect Cutter's Seedling Strawberry is superior to older varieties? Also, if Longworth's Prolific would be as well as Early Scarlet, to plant with Hovey's Seedling, and if it is better to cultivate in hills, instead of beds? S. E. C.

Worcester, July, 1861.

REMARKS.—We did not mean to say that Cutter's Seedling is better than older varieties. We told what we knew of the Seedling, purposely leaving comparisons to yourself and others. We cannot answer your second question.

A HORSE BOUGHT AND A LAWYER SOLD.

BY A COUNSELLOR AT LAW.

I had a wife and three small children. My office was in Boston, and we lived in an adjoining town. I needed the exercise of riding, and a drive now and then, toward evening, with my family, would be good for us all. We had formerly lived in the country, where everybody keeps horses, and a horse seemed really necessary to our comfort, and so I determined to buy one. I had owned several horses in my day, and knew something of horse-flesh, and I had been engaged in several horse-cases in court; and of course I knew, as every man of observation knows, that horses are a dangerous commodity to deal in. Being, however, forewarned, of course I was forearmed, and being a lawyer, I felt no apprehension that I could not look pretty well after one side of a bargain.

Before trying to buy an article, I always make up my mind exactly what I want. Then I am not misled by every foolish fancy, as one is liable to be who looks through the market for something that suits him.

The horse I would buy must be a good saddle-horse, a pacer or ambler under the saddle, but of course a square trotter in harness. He must be young and sound, of handsome, sprightly figure, kind as a kitten, never needing the whip, but yet safe for my wife to drive, not afraid of the engine, fast or slow, at the driver's election. To be sure, I had once heard our minister, when I lived in the country, tell the only horse jockey in the parish that he wanted just such a horse, and I had heard the jockey's irreverent reply, "Why, you —old fool, there *aint* no such hoss." Yet I had heard of such animals, and seen them advertised, and if I had not happened to see one that exactly answered the description, it was probably because I had not been looking particularly after him.

When it became known that I was in want of a horse, it was really amusing to see the attempts made to deceive me. They evidently thought I was a green hand at the business, and that I was a fit subject for any imposition.

One fine-looking animal was brought me, that, to a careless observer, would have seemed nearly perfection. He had a slight cough, but the owner assured me it was nothing only a little cold the horse had taken the day before, by standing in a draught. He could not deceive *me*; I had owned a horse with the *heaves*, years ago, and advised him to take his worthless beast to somebody who did not know so much about horses. Another would have suited me exactly, but he had several scars on his legs, caused, as the dealer said, by breaking through the stable floor. I inquired a little, and ascertained that he had taken fright, upset the carriage, and gone home, two miles, on a dead run, with the forward wheels, into his stall, carrying with him a hay-cutter and a grindstone, that stood in the floor, and so had cut himself to pieces trying to kick away the fragments.

Another had an interfering strap on his ankle, having lately been badly shod. I saw through that poor falsehood at once.

I think I should have bought one of a dealer whom I knew, and who assured me he would not for the world deceive *me*, had not the singular animal exhibited the unfortunate eccentricity of standing on his fore legs exclusively at intervals, when I attempted to ride him outward from the stable, owing, probably, to a defective nervous organization.

I determined to have no more to do with dealers, but to keep a sharp lookout for myself, and when I found the right kind of an animal to buy him, even if I had to pay a high price.

Walking one afternoon from Cambridge to Somerville, I rested a moment by the hawthorn hedge at the foot of Kirkland Street, and looking back I observed a beautiful black horse, surmounted by an elderly cadaverous gentleman, who had somewhat the air of a clergyman. The horse was moving at an easy ambling pace, scarcely faster than a walk, the rein hanging loosely on his neck, while the rider was serenely reading a newspaper. In the language of the free-love woman to "Artemus Ward at Berlin Hites," I mentally exclaimed, "I have found him at last." I accosted the traveller, and passing by the details of our conversation, it is sufficient to say that the animal was everything that could be desired, and although it would well nigh break the hearts of the owner's family to part with him, he could be bought for the moderate sum of two hundred and fifty dollars.

It may be interesting to the reader, although somewhat premature, to learn what I afterwards discovered, that the owner's "family" consisted of one bull-terrier pup which slept with him in a stable loft every night.

I met the owner by appointment next day, at my office in Boston. He had been employed, he said, as travelling agent of a Boston house, and had no further use for the horse: he would give me a written warranty of the animal as perfectly sound and kind; indeed I might take him home a week, and try him, and see for myself. Nothing could be fairer than this. I took my prize to my own stable, I kept him a full week, I rode him and drove him daily; my wife rode him and drove him; my man Barney rode him and drove him. My admiration of him increased. He was to all appearance sound and kind. He was fast or slow, as I chose to have him. He would face the cars without winking, and stand without tying. In short he was a perfect horse. At the end of the week I paid the price, took a written warranty, and went home rejoicing in my success. Every horse should have a name, and we concluded to call this one, on account of his many good qualities, Honesty. For a few days I was engaged constantly in a long trial in court. The horse stood still in his stable, well fed and well groomed, so as to be in the best condition for use when my leisure days should come. Barney said one day that he had harnessed Honesty to the wagon to bring home some oats from the store, and that he refused for some time to start from the yard. However, Barney was no horseman, and I thought the fault was in his awkwardness in handling the reins. A day or two later, my wife's brother took her with the children out for a drive with Honesty, in the carryall, and she reported that the animal insisted on going up Beacon Street instead of Tremont Street, where they wanted to go. This did not seem exactly right, but still I had full faith that Honesty would prove all right when I held the reins.

Finally, my trial in Court was finished, and there was to be a pic-nic near Fresh Pond, where all my friends were going. I had bought a new light top buggy, and harness to match, and wife and I drove up. Honesty was in high feather, and made the new carriage spin along like a linen wheel. We passed the afternoon in the woods, and when our team was brought up for our return, everybody was attracted by our elegant turn out. I confess I felt not a little pleased with this universal appreciation of my taste. I don't know why it is, but everybody considers a compliment to his horse as fully equivalent to one to himself. We bade adieu to our admiring friends; I handed my wife into the carriage, gathered up the ribbons and waved my hand by way of parting salutation. Honesty pawed, but did not move forward. I chirruped and shook the reins. Honesty shook his head, and gave a significant snort. A friend took him by the bit, when he stepped rapidly backward, till the new buggy brought up against a tree. I touched him with the whip, when he reared and snorted, and my wife screamed. "Don't whip him," cried a friend; "whipping never does any good to a contrary horse." "He is an old offender, I see by his actions," said another.

The details of this exhibition are not agreeable to dwell upon. Neither coaxing, nor whipping, nor pushing, nor things present, nor things to come, nor any other creature, could induce that beast to even draw the empty carriage out of its tracks. I asked a friend to take my wife home, and leaving my elegant carriage, ignominiously led the obstinate brute to a stable near by, and left him for the night.

"A sadder and a wiser man I woke the morrow morn." I persevered with Honesty yet awhile, but after being kept two hours by his stopping in a rainy night on Cambridge bridge, on one occasion, and being obliged to leave him in the stable yard, when in great haste to meet an engagement at Lexington, I reluctantly concluded that he was not perfectly kind. My wife had long since declined further experiments with him. I was puzzled whether to admit myself duped and cheated, or attempt to cure the defect. I rode the beast occasionally, and sometimes drove him, with various success. One day I had business at Concord, at the County Court, and with a friend drove into that beautiful village just at sunset. Court had just adjourned for the day, and my brother lawyers and clients, and jurors and witnesses were lounging about the hotel and the old elm on the common. Just as we came in front of the Middlesex hotel, I observed my horse suddenly to falter; then he stopped, throwing up his head, and jerking it sideways in a manner remarkable to see, seemed quite bewildered. "He has a fit;" "jump out or you will get hurt," cried the multitude, which at once surrounded us.

My friend obeyed the call, and I attempted to do so, just as the distracted beast sallied backward over the shaft, "and Mortham, steed and rider fell." Down we came in one miscellaneous heap, the carriage essentially smashed, and his owner vexed and discomfitted. A few days proved that Honesty was subject to frequent attacks of this kind.

But had I not a warranty, and am I not a lawyer? Straightway I commenced an action for deceit. It is a proverb at the bar, that a lawyer who tries his own case has a fool for his client. I retained and paid counsel. I summoned and paid witnesses; I consulted and paid Doctor Dadd and other experts. The case was tried, and all Middlesex county was made to understand how a lawyer had been cheated by a jockey. The jury rendered a verdict in my favor for $125 damages, probably upon the idea that a lawyer ought not to recover more than half that he is cheated out of. I gave my execution to an officer, with orders to arrest the rascal, and told my counsel to oppose him at every step and follow him to the end of the law.

After a few months, my attorney sent for me, and gave me the result of following my directions. The defendant had been committed to jail where he had quietly remained several weeks, apparently happy in the consciousness that by the beneficent provisions of our laws, I, his creditor, was paying $1.75 per week for his board. Then he had given notice of his intention to avail himself of a further beneficent provision of our statutes by taking the poor debtor's oath. My counsel had faithfully obeyed instructions and opposed him there, paying for me, according to law, two dollars per day to the Commissioner, while the examination was pending. Finally the vagabond had succeeded in swearing out, and my various bills amounted to about the amount I had first paid, $250.

The enemy was free, but I was not. I still had that "dreadful horse," worse than Mr. Pickwick's that nobody would take away. A neighboring horse dealer offered me $50, and I sold him and took his note for the amount. A few days after, I asked him what he had done with him. He said he had advertised him to sell at a horse sale in the city. I had a rational curiosity to see the advertisement, and asked him to show it to me, which he did, and it ran as follows:—"Black Saddle Horse. A particularly fine black saddle horse, perfectly sound and kind in all respects and free from tricks."

I don't know how much he got for his fine saddle horse. I only know that I still hold his worthless note for fifty dollars.—*American Stock Journal.*

For the New England Farmer.

CROPS---PRECISE STATEMENT WANTED.

Will your correspondent, Mr. N. Hitchcock, who has presented in the columns of your paper a statement of his grain crops for the last year, confer a further obligation by informing the readers of your paper, the number of days' work, man and beast, performed on the three lots, sixteen acres in all. It strikes me that he has put his figures too low, and not too high, as he feared. His land must be good and be well tilled to produce, after paying interest on its value at $68 per acre, an averaged profit of over thirteen dollars per acre, or about twenty per cent. I notice, also, that he credits his corn crop with one-third of the manure, while he charged in the first instance to cost, and I do not perceive from the inspection of either the oat or rye crop, any charge for the manure carried forward from any crop of the previous year, thus showing that to be his regular practice. These are important points to be observed. No greater benefactor to the agricul-

turist can be found, than he who will furnish data by which the cost of raising crops can be ascertained, and I would suggest to Mr. Hitchcock, that his figures, to be of any value in this respect, must be expressed, not in dollars and cents, but in days' work, weights and quantities. I have no means of going and doing likewise from reading the fact that he applied manure costing fifty-three dollars to his acre of corn. I want to know the number of cords and the kind of manure employed. I should likewise feel grateful for any information as to the expense in labor, not in dollars, of harvesting six acres of corn, now represented by two items, cutting stalks and picking corn, charged at twenty-four dollars; if nothing more, I should be glad to see this sum apportioned among the items—bundling 1088 stalks, 664 bundles of corn fodder, husking 256 bushels of corn, taking up and cleaning 10 bushels of roots, getting in 4 loads of pumpkins, harvesting and shelling half a bushel of beans, all of which came from the corn-field. When we can approximate more closely than we now do to the labor required for all these operations, we shall be on the right road to agricultural success. F.

For the New England Farmer.

RETROSPECTIVE NOTES.

CAUTION IN PURCHASING SEEDS OR IMPLEMENTS NECESSARY.—The readers of the *N. E. Farmer* could hardly fail to notice the very excellent article with the above caption in the weekly of May 11th, and in the monthly of June. It certainly seems scarcely possible that men of ordinary discernment, and of honest and good hearts, could fail to recognize in said article, abundant evidences of a superior grade or amount of the same intellectual and moral qualities; for what but an honest and good heart, or a large amount of benevolence and public spirit, could have prompted the writer to take the trouble of penning that article, while perfectly aware, as he undoubtedly was, that it would expose him to the ill will, maledictions, and perhaps, revengeful feelings of the knaves and impostors against whose tricks and traps it was his wish to caution and protect his unsuspecting brethren? Then, too, what but a superior degree of intelligence and penetration could have enabled the writer to succeed so well in the accomplishment of his very benevolent and public-spirited purpose? For these qualities, so manifest in this article, Mr. BASSETT must surely have secured, not only the admiration, but also the grateful appreciation of hundreds of the readers of his communication. Such, at least, were the sentiments called forth towards Mr. BASSETT in the breast of one who knows nothing of Mr. B. save through the columns of the *Farmer*, and who, from the many hundreds of miles between them, is never likely to know him—who, in a word, can be influenced by no personal or local partiality, but only by considerations in which all the readers of the *Farmer* may equally participate.

But our purpose in taking pen in hand on this occasion, was, not so much to give some expression to the sentiments of admiration, gratitude, and high appreciation to which Mr. B. has so fully established an unquestionable right and title from his agricultural brethren—not so much to give an expression to such sentiments, as to make an effort to impress more deeply upon the minds of farmers the necessity for an ever-increasing watchfulness against the impositions and frauds of the advertisers and venders of new things in their line, inasmuch as the number and the cuteness of these impostors seem to be continually on the increase.

The necessity of wide-awake watchfulness on the part of farmers, and the value, moral, as well as pecuniary, of such cautions and suggestions as those contained in Mr. BASSETT'S article, will appear quite manifest, we think, to those who will give due attention to such considerations as the following:

1. The number of attempts at frauds upon farmers, has, of late years, been continually on the increase. Those who have specially noticed the advertisements in agricultural and other papers supposed to be largely circulated among this class, must be well aware of this fact, namely, that attempted frauds on farmers are continually on the increase; and those who have not given any special attention to such attempts would require, for their being fully convinced of the fact, only to see a moderate collection of deceptive advertisements, and to hear of the sales of worthless articles by peddlers and others, nowhere so extensively, perhaps, as at Fairs and Exhibitions, where the hurry and excitement of the scene tend to prevent due carefulness and caution.

2. These attempts at frauds upon farmers are increasing, not only in number, but also in ingenuity, cuteness, and cunning craftiness lying in wait to deceive. This is a reason of much force for wide-awake watchfulness, and for gratitude to those who expose such trickery, or caution us against it.

3. Farmers cannot rely for protection against the impositions and frauds attempted to be practiced upon them, either upon the publishers or the editors of agricultural papers, and far less upon those in the same relations to the common newspaper press. Of the reasons why such protection need not be looked for from either of the sources just named, we will speak immediately; but taking our proposition as a fact, and waiving all question as to the fact being right or wrong, it is evident that when farmers cannot rely for protection upon those to whom they most naturally look for it, they must the more entirely depend upon their own penetration and good judgment, with the aid of such hints, rules, or suggestions as may be furnished to them by those of their fraternity whose eagle-eyed discernment and whose public spirit or benevolence are more or less like those so notably evinced by Mr. BASSETT.

Some of our farming fraternity having large conscientiousness, or a more lofty tone and standard of morality than is usual, or having suffered loss and vexation from having become the dupes of some cunning sharper whose advertisements had been admitted into a paper enjoying their implicit, unsuspecting confidence, have insisted upon it as due at once to morality and to the patrons of their papers, that publishers of newspapers, and still more of agricultural papers, should rigidly exclude from their columns all advertisements in regard to which they had not good as-

surance that they were perfectly free from all intention or tendency to deceive and defraud the unwary. But to comply with this requirement, so far at least as to demand, from all who might offer advertisements for insertion, a good and sufficient guarantee of their perfect freedom from any intention to deceive or defraud, and even from any tendency in that direction, would impose upon publishers a very delicate, disagreeable, and difficult task—one, indeed, which would be often quite impracticable. Accordingly it has come to be generally understood and mutually assented to between readers and publishers, that while all advertisements of an indecent character, and all which are obviously intended merely to enable knaves to fleece and rob the unwary, are to be strictly excluded, there may nevertheless be admitted a large class, in regard to the good faith or honorable intentions of those offering which, no guarantee can be obtained. There are a great many advertisements which, though of a quite dubious character, there might be no impropriety in inserting, provided the publishers have no opportunities for judging of them and determining their true character and purpose superior to those which their readers have, or may readily put themselves in possession of, and provided also that the publishers have distinctly announced to their readers, or are sure that their readers understand, that the insertion of any advertisement in their columns does not imply that they have implicit confidence in its freedom from fraudulent intent, or that they are giving any sanction to its pretensions by the mere insertion of it.

But time and space forbid farther details. This we regret, as some of our remarks may be misunderstood without further explanation, as they would be, certainly, if it were supposed that we intend to cast any reflections upon our publishers. On the contrary, we would rather praise them, for none of them have published such a notable advertisement, or any so evidently intended to rob the farmers, as that of the Japan Wheat schemers. Our main aim has been to impress upon the farmers the need of great caution in dealing with certain advertisers of seeds, trees, implements, manures, cattle-food, &c., and the importance of exercising their own judgment and a wide-awake watchfulness, instead of depending upon others. As helps to such self-protection, the readers of the *Farmer* ought to be duly sensible of their obligations to Mr. BASSETT for his excellent suggestions. MORE ANON.

MORTALITY FROM DRINKING BEER.

A Washington correspondent of the Baltmore *Clipper* thus accounts for the sickness prevailing in some of the New York regiments:

The proportion of deaths in one or two of the New York regiments is far beyond what is reasonable, or in the nature of things necessary. The Albany regiment suffers heavily. Intemperance is the chief, if not the only cause of this. I learn that whilst whisky is disallowed the men, they are permitted to indulge in malt liquors, and especially lager beer, to their utmost will, under the very mistaken impression that such drinks are not injurious. In very warm weather, malt liquors are far more dangerous than alcoholic ones, by reason of their rapid generation of acidity in the stomach, and thereby causing choleric symptoms of varied character.

A striking instance of the ill effects of malt liquors in very warm weather, was furnished in the town of Newark, Ohio, in the latter part of the very hot and dry weather of 1854. Within the short space of thirty-six hours, from thirty to forty persons died of what was called cholera. At first the faculty and the public were stunned at this mortality, but a little investigation showed that in every instance, the disease was caused by beer drinking. In several instances, the victims resorted to beer to quench the thirst of fever. It is believed that every one who did so, perished. The only drinks for some time allowed by the authorities of the town were alcoholic, and as a good price was charged for them, the chance was that they were better than usual.

For the New England Farmer.

DOES DRAINAGE INJURE LAND BY LEACHING?

BY JUDGE FRENCH.

It is a frequent objection to thorough draining, that it must carry off the salts of the manure applied to the soil, and the natural elements of fertility which it contains.

This objection is heard only from those who have not had faith or enterprise enough to attempt any experiments, because, although it rests on some basis of truth, it is insignificant, when compared with the advantages of drainage.

Without entering upon the discussion of the vexed question, whether manures are lost more by evaporation or by sinking, it is doubtless true, that those parts of manure usually termed salts have a downward tendency, and pass to some extent through the soil.

Common salt applied to land in sufficient quantities to destroy all ordinary vegetation sinks out of the way in about three years so as to produce no visible effect. We know that salt is not evaporated, because it is readily made by the evaporation of salt water, the water passing off into the air, and leaving the salt into the pans.

Some of the non-volatile portions of manure are taken up by our crops in their growth, some are seized upon by new chemical affinities in the soil, and some no doubt sink below the reach of roots, and pass off in the natural or artificial drainage of the field.

All productive lands are drained either by nature or art. The water which falls on them must escape by some means, and evaporation cannot carry away half of it. If it do not escape, it is stagnant in the soil, and destroys all valuable vegetation. We see, then, that this objection is too broad, and applies as well to our high, dry lands, where the water line in summer is ten or twenty feet below the surface, as to land drained by art to the depth of four feet.

We know that the passage of water through soil of any kind, to some extent, filters the water and tends to purify it, or in other words the soil takes from the water its elements of fertility. A great advantage of draining is to get from the water the valuable substances which it holds in solution. Some of these exist in rain water when it strikes the earth, and when it falls on well manured land, it dissolves and takes in still more of them. If the water thus saturated with the elements of fertility, runs off of the surface, or runs away in shallow drains, it must carry with it the very substances essential to the growth of our crops. The object, then, should be, to free the soil of stagnant water, and to do it in the manner best calculated to extract from the water its valuable properties. This is to be accomplished by filtering the water through as great a depth of earth as is convenient, within reach of the roots of our crops, and sending it away pure from our field.

With these principles in view, it is interesting to inquire as to the effect of different soils in filtering water.

Careful investigations of this subject have been made with various objects, as well to ascertain the value of drainage water for irrigation, and for the use of cattle and for domestic purposes, as with reference to the proper depth of drains.

In the Report of the General Board of Health of the City of London, we find the recorded opinions of the best agriculturists in England and Scotland upon this point.

Mr. SMITH, the father of the Deanston system, says:

"The water flowing from drains is generally very limpid and pure, although at times, when much manure has been recently put upon the land, it is impregnated to a considerable degree with soluble matter, and sometimes coloring. It is, nevertheless, usually fit for domestic purposes, and is much prized where there are but few springs, and where the people, previous to the introduction of thorough draining, had to bring the water for domestic purposes from a distance, by carts, at great expense. They now form wells to retain a supply of the drainage-water for the dry seasons, by which their health and comfort have been greatly promoted. The cattle are also supplied with wholesome water in the summer."

Mr. PARKES, whose name carries weight on all subjects connected with drainage, says:

"The results of my experience tend to show that the water issuing from deep under-drains in land is generally soft, that it is relished for drinking by stock, and approved for household and washing uses in villages and hamlets, where I have had to conduct water from the drainage of land to serve those purposes. The water derived from a shallow system of drainage is often troubled after rain or after the plowing up of fields, and is offensive to the taste and smell after the manuring of lands. The water of deep drainage is generally perfectly pellucid, and I should consider a drainage to be imperfect, if sand or earthy matter were carried off from the soil by drains."

The following testimony in favor of deep drainage, by ALEXANDER MACCAW, Esq., is from the same source:

"An instance of the analysis of drainage-water is recorded in the 'Rural Cyclopedia,' edited by the Rev John Wilson, under the article 'Manures.'

The depth of drains are not mentioned, but it may be concluded that they were shallow, probably not more than two feet, the deeper system not then being introduced.

Three analyses were taken from three specimens of drainage-water caught from the discharge of subsoil drains of a farm in East Lothian.

1st. After the drains had been dry for many weeks in November, 1844;
2d. On 29th April; and
3d. On 16th May, 1845, when the land had been sown with a grain crop after a winter fallow; the manure applied to the crop was guano.

The result shows the quantity of salts and of vegetable and animal products found in the water to be a very serious affair in respect to the extraction of their valuable fertilizing matters, while their retention in the water rendered it unfit for domestic purposes. In another analysis taken at the same time of the turbid water from the surface of the same land, the results appear to have been little different from those of the water from the subsoil drains.

I have no doubt that by the process of thorough deep drainage a considerable portion of valuable fertilizing matters may be extracted with water from the lands, but not a tithe of what would be carried off by water from the same soil previous to drainage."

EDWARD SCOTT, ESQ., gives the following as the result of his observations:

"Water that flows from deep drains is more pure and clear than that from shallow drains. Water from shallow drains frequently carries away the salts, vegetable and animal products, contained in the manures applied to land, which is very apparent where good farm-yard manure has been laid on fallow, and heavy rains follow immediately after."

It is ascertained that neither rain-water nor the water of streams or rivers, nor the water of deep springs or wells, is ever found entirely pure. Its impurity results from its power of holding in solution many substances, of washing them out of the soil and plants, and even out of rocks. Various means have been adopted to filter the water of streams for domestic uses. The water of the Seine is extensively used after a process of this kind, for such purposes, in Paris.

Of soils, open gravel and sand have probably the least power of divesting water of its impurity. Clay, both because of the closeness of its structure, and because of its chemical affinities for substances usually held in solution by rain water, or washed out of manured land, passes the water in a purer state.

It is obviously of no consequence to the farmer what becomes of his manure after it has sunk beyond the reach of the roots of his crops, whether it goes down to the centre of the earth, or runs away in drains. It is important, however, to arrest it, at any depth, where it may be rendered available. Mr. Mechi, of Tiptree Hall, England, says that, irrigating his land with liquid manures, he has frequently caused the drains at five feet in strong clays to discharge the colored liquid! This shows that he wastefully applied his manure,

whatever else it may prove. The quantity of manure usually applied, in the best cultivation, could produce no such effect in any soil, at four feet depth.

We conclude, on the whole, as to the objection that drains tend to injure land by leaching out the manures, that any loss in this way is far more than compensated by the prevention of surface washing, and that the loss is much less in deep than in shallow drainage.

EXTRACTS AND REPLIES.

THE BUCKEYE MOWER.

In speaking of Mr. Ayer's experiment with a Buckeye mower, you mention two acres, where it should have been *ten*. The noticeable point of my communication was that an acre of grass, yielding *two tons* of hay, was cut with this mower in *forty minutes*, and that the entire field of ten acres, yielding twenty tons of hay, was cut with only *seven hours' labor* of one man and two horses.

Mentioning this experiment to Major Allen, who owns a farm adjoining Mr. Ayer's, on which he cuts forty tons of hay annually, he said it was better economy to use a scythe—when laborers could be employed for *a dollar and a quarter a day*—as he had hired them the present season.

Now let us compare the expense of these modes of cutting grass:

1—BY THE MACHINE.

Costing $100, say at $2 per day	$2,00
Two horses, at $1 each	2,00
One man	2,00
Entire expense of cutting 20 tons	$6,00

2—BY THE SCYTHE.

Supposing the man to cut 2 tons per day.

Labor of the man 10 days, at $1,25 per day	$12,50
Cost of scythe and snathe	2,00
Grinding and fitting, 30 cents per day	3,00
Incidentals	50
	$18,00

In the one case, the cost of cutting will be $6; in the other $18—three times as much. How do these items accord with your notions?

July 20, 1861. J. W. P.

REMARKS.—Pretty much as it would to see a man set his family—who had enough else to do—to spinning cotton and then weaving it into cloth. We have no doubt, from our own use of the machine, but that the Buckeye will handsomely cut an acre in 40 minutes, all day long, where there are two tons of grass per acre.

—

CORN AND SPECIFIC MANURES.

In reply to a Newton, N. H., correspondent, whose corn did not come up, we will say that he probably applied too much superphosphate to the hill. A good sized table-spoonful is enough when planting, and another at second hoeing. We have a field of between three and four acres, managed very much as he describes his process, and it is shoulder high, and as rank as a vigorous alder swamp. Come and see it, friend T.

TRIAL OF MOWERS AT SOUTH VERNON.

We publish for the benefit of the farmers in this vicinity, the draft of several different mowers, as tested by dynamometer at a trial at South Vernon, last week. There were eleven machines entered, among which are noted the draft of the following:

Gore's Bay State, formerly called New England	4	feet cut,	240	pounds.
Newhall's Winchester	3½	" "	162	"
Pony, Allen's Patent	4	" "	225	"
Wood's	3½	" "	200	"
Buckeye	4	" "	250	"
Hubbard	4	" "	225	"
Manny's	4	" "	240	"

The Pony was worked with one horse that weighed 830 pounds, and mowed one-fourth of an acre in 22 minutes in the forenoon, and same amount in 17 minutes in afternoon, finishing first.

REMARKS.—A fair trial of mowing machines requires that they should all move at the same moment. Thirty minutes' difference will sometimes make several pounds' difference in the draft. For instance: put a machine into a heavy piece of grass at 8 o'clock in the morning, when there has been a heavy shower the previous night; then put in 30 minutes later and the draft required will be found materially less than on the first trial.

—

KEEPING HENS.

My stock consists of eight hens and a cock; they are the common dung-hill fowl, so near as I can tell, at least they are nothing more than "common" hens. My method is this: they are confined in a barn cellar where the manure from a horse is deposited in the summer, and the addition of that of a cow in winter. The wall is pointed so as to render the cellar as warm as possible. So I have no expense in building a house for them. Buckwheat is the chief food they have. I consider it the best thing they can eat. Also, oatmeal is very good for a change, and they will not thrive so well when fed on one thing the year round. I am never at the trouble of getting meat for them, simply because they lay well without it.

Claremont, N. H., July, 1861. C. F. H.

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WARTS ON A HORSE.

Being a reader of the *Farmer*, and having noticed that through the medium of its valuable columns you are willing to impart useful knowledge to all its perusers, I would thank you, or some correspondent, to give a recipe for a safe and efficacious remedy for removing warts from the flesh of a horse. ALDEN JAMESON.

Waltham, July 22, 1861.

REMARKS.—In the *Horse-Owner's Guide*, a book which every horse-owner should own, we find the following remedies prescribed: If hard and dry, dulcamara, sulphur; with formation of boils, arsenicum; bloody and painful ones, causticum; if humid, thuja, sepra; small, in great numbers on the lips, calcaris—carbonica. Under another mode of treatment, if the warts are sin-

gle, with pedicles, they may be under-bound with waxed silk thread. Large warts may be cut out with the knife, and the root fired.

—

RUSHES AND TURNIPS.

1. Can rushes be killed out and *kept* out of reclaimed swamp land, without its "costing more than it comes to?" If so, how? Will bending down and burying them alive and whole, destroy them?

2. What is the best method of pulling out cedar stumps, 6 to 10 inches in diameter, on land hardly firm enough to bear up an ox team?

Perhaps plowing and draining may be the only remedies for rushes. I have just mowed a piece, nicely plowed some four years since; some parts are yet good; in other parts, nine-tenths are rushes. A narrow strip (in the vicinity of a dead furrow, where water stood for weeks in spring,) was covered with gravel two years ago, sown with grass seed, and is, as yet, comparatively free from rushes. E.

South Framingham, July 24, 1861.

REMARKS.—We do not know about the rushes. The stumps may readily be pulled with *Willis' Stump Puller*, as the machine and team may stand on the firm ground, and the chains extended over the soft swamp to the stumps.

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TRIAL OF MOWERS.

MESSRS. EDITORS:—As there seems to be considerable interest in the merits of some of the different mowing machines, I send you the inclosed report of the relative power required to move the different mowers in the same grass.

The Pony is a *new machine* with two driving wheels and folding-bar. Having used the two-horse two years, and the one-horse the present season, I am astonished to find that it did not draw lighter. I have noticed at several trials the draft varied from 125 to 150 pounds only.

CHARLES I. PARSONS.

Northampton, July 16, 1861.

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A GREAT RYE CROP.

In July, 1859, I had land in grass that gave a very light crop. It was plowed as the grass was taken from it. About the middle of September it was again plowed, and subsoiled, manured, harrowed and sowed with one bushel of rye to the acre. Grass seed was also put upon it. In July last it was harvested, and was, in February last, thrashed by hand. The product was 91 bushels of rye from 2 acres and 12 rods of ground. The straw from one shock was weighed, and, by tale, there are over 9400 pounds of straw. N. B. W.

New York, July, 1861.

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A COW WITH THE CRAMP.

Can you or any of your correspondents tell what to do for cramp in cattle? I have a valuable cow that has it severely at times. It takes her in an instant, and entirely disables her. As she was going from the cellar to the barn, it took her in one hind leg and she fell down stairs. Last night, when my cows came up, she was missing; on searching she was found half a mile from home, with no use of one leg, and had to be left over night. She generally gets over it in about twelve hours, but is liable to be taken at any time, without a moment's warning.

New Worcester, July, 1861. H. Y. GATES.

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CROPS IN N. H.

The prospect of crops here is good; corn, though a little later than some years, hardly ever was better. Grass is first-rate, and with a fair season to get it secured, hay must be abundant and good. The fruit crop, however, is very nearly a failure—there are no cherries, no plums, and I think very few apples. All other farm crops promise well. SIMEON HEYWOOD.

Claremont, N. H., July, 1861.

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"GREAT WOOL AND LITTLE CRY."

Mr. J. H. PETERS, of this place, sheared from six two-year old ewes, 61¼ pounds clean wool; from five yearling ewes 48½ pounds, and from a two-year old buck, an eleven months fleece of 21½ pounds wool! Also, from a fifteen year old ewe 8 lbs. 15 oz., said ewe having raised a smart lamb. Mr. Peters' sheep are of the full blood Spanish Merino, and he is meeting with well-deserved success in his efforts to improve his flocks, his buck lambs being eagerly sought for in this section. VERMONT.

Bradford, Vt., July, 1861.

For the New England Farmer.

THE THRUSHES.

I have read with interest the articles in the *Farmer* relating to the birds of New England; the author shows himself to be well acquainted with his subject. In reading the article in relation to the Thrushes, I could not resist the inclination to write out some of my thoughts on the subject. There are, no doubt, many erroneous ideas in relation to these birds, and "J. A. A." has yet to learn some things about them, I think. There are four species in New England that very much resemble each other, and perhaps more. There is the *Hermit Thrush*, *Wilson's Thrush*, the *Olive Back Thrush* that we have in central Vermont; the *Wood Thrush* I have never seen here. The Hermit frequents all our woods, and though rather shy, does not prefer the deepest and thickest forests, but is often seen in open land and pastures. His song is superior to any other bird of the woods. It is a given point, as far as my observations go among the lovers of bird music, that no other bird has so sweet a strain. There is a continued variation at every pouring forth; say first a low, rich strain, rising higher and higher till it arrives at a mere jingle. There seems to be no end to his variations. The bird will sometimes sing in an under tone, and when near you, while thus singing, the sound would seem to come from a great distance.

This bird arrives here about the 15th of April, and builds its nest about the middle of May; they also raise broods in June, July and August, as I have found nests in each of those months. Their nests are built on the ground, sunk somewhat, so that the top comes a little above its leafy bed. The nest is composed of grass roots, and

lined with fine roots and moss. The eggs are usually four, and blue, without spots. It is unlike the Wilson Thrush's nest, which is always somewhat elevated above ground, and in good part composed of leaves. Ornithologists say the Hermit builds on trees, and has blue spotted eggs. I have no doubt but that there are a number of species that so near resemble each other, that they are described as one, and one of them builds as above mentioned on trees.

"J. A. A." remarks, that the Olive Back Thrush is the least suspicious of the four thrushes. Now the bird I take to be the Olive Back is the most so with me. It is found only in the darkest of forests, and while singing, is concealed in the top of some tall evergreen, and I have noticed the Hermit shuns his dark retreat. The Olive Back has a sweet note, and varies not unlike the hermit, but not of so rich a flow of song; but I think superior to the Wilson. The Olive Back seems to live in communities. You may pass through woods to a great extent and not meet one, when Hermits and Wilsons may be seen and heard. But the Wilson is frequently in the Olive Back's choice retreat, and sings from the under bush far beneath him. I think the Thrushes will have to be newly arranged, when I trust there will be found one or two new species, that now go under the name of Hermit Thrush, (*Turdus Solitarius.*) C. S. PAINE.

Randolph, Vt., July 19, 1861.

For the New England Farmer.

BEE HIVE IMPUDENCE.

On reading the *Farmer* of June 29, I learn that Mr. Brackett has opened his battery upon me again. He seems to know all about other people's business, and mine in particular. He reminds me very much of the man in the fable who had a hoe handle so long that it was easier to work in his neighbor's garden than in his own.

Mr. Brackett's article compels me to make a full statement, and show the true difference between my Patent Compound Hive, and the one known as the Langstroth Hive. I have ever refrained from saying anything against any patent hive or patentee. But being assailed by a party who is a perfect stranger to me and my hive, I feel it a duty I owe to myself and hive, and to bee-keepers generally, to show the exact difference in the two hives, and then leave it to the reader to judge which is the most desirable.

1. The Compound Hive is 24 inches in height, including 8 inches in the top; the depth of the cap for surplus honey boxes, 18 inches by 10—holding over one bushel, aside from the honey boxes; it is also supplied with movable comb guides, 13 inches in length by 11 in depth—eight of them filling the hive—with an arrangement of my own invention at the top of the bars or frames, causing the bees to build their comb within the guide perfectly straight, without the use of either bee comb or beeswax.

2. The Langstroth hive has a movable comb frame, some 18 or 20 inches long, by 6 or 7 inches in depth, with a flat bar at the top of the frame; in order to have the bees build their combs within the frames, the bevelled edge or salient angle is made use of on which Mr. G. H. Clark holds a patent; and every person using the Langstroth hive is liable to pay another fee of five dollars any moment to the agent of Mr. Clark. I suppose Mr. B. was not aware that the Langstroth hive was an infringement upon another patent.

3. The Compound Hive is so constructed that it can be used in double form, giving a dead air space around the entire swarm, or the hive can be used in a non-swarming condition, thus preventing natural swarming; or it can, in case of emergency, be used as two separate hives, giving ample room for two separate colonies; it can also be so arranged that the bees can occupy the main portion of the hive, whilst the other part will answer as a platform to set it upon.

4. The Langstroth hive is so constructed that it will not permit of any of these changes, and in shape and appearance resembles a small size cook-stove more than it does a bee-hive.

5. The Compound hive is furnished with a metallic instrument called a regulator, thereby giving the bee-master full control to the entrance of the hive at all times. It is made adjustible by means of a thumb-screw, giving an entrance from one-fourth of an inch to four and a half inches, as occasion may require. With this instrument, the drones can be destroyed. A colony can be prevented from flying to the woods in swarming time.

6. The Langstroth hive has an entrance over one foot in length; two small three-cornered blocks are made use of in contracting the entrance, which are easily removed by the bees, and they cannot be made stationary without nailing, rendering them very inconvenient to manage.

7. The Compound hive is supplied with another instrument called a bee-catcher, wherein a colony of bees can be captured in the hive from a tree in the forest, several miles away, and serve us the same as our other colonies; or a swarm of robber bees can be captured in a hive by themselves; this being the only way to break up robbers successfully. By the use of it a swarm of bees could be captured in the hive in less than one hour at any time, should the bee-master have occasion to sell a swarm and wish to deliver them before night. The bee-catcher can also be successfully used in expelling bees from the surplus honey boxes after being removed from the hive, and no danger of the bees returning to rob it.

8. The Langstroth hive has nothing of this kind. I suppose Mr. B. is aware that the Langstroth Patent has but a short time to run, it being patented in 1852.

I have made several improvements upon the Compound hive, and taken out several patents within the last three years.

Mr. Brackett has also accused me of copying cuts after Mr. Langstroth, and also of copying after Bevan, page after page, without giving him credit. This charge is untrue. I have ever endeavored to give credit where credit was due. I would further inform Mr. B. that I have European publications in my possession that contain many of the cuts found in Mr. Langstroth's book.

Having been interested in patent rights for many years, I have learned this fact, that when Mr. A. has invented a machine and Mr. B. has improved upon the same, as his letters patent will show, the only course Mr. A. has got, is to

cry infringement, humbug, and the like. I am also well aware that most of these things come from ignorant and irresponsible parties, who know nothing of the principles of infringement, or the laws that govern Patent Rights.

If Mr. B. had made a full quotation from my book, page 99, it would not have seemed quite so improbable as he tried to make it appear in his article of June 29. I did say, if a bee-keeper should commence with a strong, healthy colony, in the spring, furnish them with a large or non-swarming hive, supply them with the comb already made, prevent the male bees and the drones from hatching, and should it be a good honey season, with good management, the apiarian might expect two or three hundred pounds of honey.

It is true, all these advantages could not be had perhaps at one time in fifty. Should I have stated these great results could be attained every year in any kind of hive, it would have been folly indeed. I have made no assertion either in book or circular but what I can substantiate.

The quotation I made from an article written by Mr. Quinby, published in the *Rural New-Yorker* of Dec. 18, 1858.

Certainly, it does not seem to tickle Mr. B. any better than Mr. Q.'s straws did in the *Farmer* of May 18, simply because the quotation was certified to by me. Mr. Quinby goes on to say that he had a large number of the Langstroth hives in use, and that two-thirds of the bees built their combs in every possible direction without any regard to the frames, making them, so far as movable frames were concerned, no better than the common box hive; also stating that both time and money had been thrown away by those who had purchased the hive, and recommended the common hive in its stead. Is this wonderful hive any better than it was in 1858? There has been no additional patent taken out since to make it better. What Mr. B. calls a humbug quotation may be found in the *Rural New-Yorker* in the precise words I have made use of. It is very evident that one of two things must be the case—either that Mr. B. is a humbug or Mr. Quinby has made two contradictory statements in reference to the same thing. I think that Mr. Q. is too well versed in bee culture and entomology generally, to be guilty of anything of the kind. As Mr. B. has never seen one of my complete hives, I would refer him to Mr. J. W. Merrill, 28 Devonshire Street, Boston, who will give him a circular explaining it in full. K. P. KIDDER.

Burlington, Vt.

P. S. The reason why I have not replied before is that I have had my own business to attend to, instead of that of my neighbors'.

REMARKS.—We cannot longer continue this discussion, as there is little in it to benefit the general reader or the bee-culturist himself.

CURE FOR RING BONE.—A correspondent asks for a cure for "Ring Bone." Here is a good one, that has been tried, and is sure for all sprains, bruises, blows, etc.:

Dissolve 1 oz. camphor in 8 oz. of spirits of wine; add 1 oz. of oil of turpentine, 1 oz. of spirits of sal ammoniac, ½ oz. of oil oreganum, one big table-spoonful of liquid laudanum; rub well in with the hand for a quarter of an hour, four times a day, and a cure will be effected.—*Ohio Valley Farmer.*

For the New England Farmer.

THE APHIS, OR PLANT LOUSE, ON WHEAT.

Within three or four days, we have received several specimens of wheat heads covered with a little plant louse, which is described below by Mr. F. G. SANBORN, who is now engaged in the preparation of the new edition of Harris on Insects. It does not appear that they have yet injured the wheat.

Andover, July 31, 1861.

MR. EDITOR:—The grain crops throughout the State are now being greatly injured by insects of two different classes, both occurring in extraordinary numbers, although one of them is a very common species, and may be found in smaller quantities in any year, beneath stones and upon various succulent plants.

The first, which has been aptly styled the "army-worm," is said, by Dr. Fitch, of New York, to be the larva or caterpillar of the *Leucania unipunctata*, (see the *Country Gentleman* of July 25, p. 66, for Dr. Fitch's interesting communication on this insect.) It is of a dark brown color, almost black, with three yellowish longitudinal stripes on the upper side, and two bands of the same color just above the legs, which are sixteen in number; all of the stripes are much more distinct toward the extremities; the head is rounded and beautifully marbled or honeycombed with dark lace-work on a yellow ground, and from the top of the head two curved black lines run down the face, diverging as they approach the mouth. I have had a number of specimens sent me from Fall River and vicinity, which vary from eight lines to an inch in length, and I have reason to suppose that none of them have arrived at their full growth. On superficial examination it appears to be naked, but on holding it between the eye and the light a few short hairs will be seen thinly scattered over the body, and rather more thickly upon the head. They began to attract attention in this State about the first of this month (July,) and rapidly devoured almost every green thing in their path, some fields being entirely swept by them. They appeared to march in a compact mass, when passing from one field to another, preferring a gateway to crawling through a fence or wall, beginning to move about noon. By digging a ditch about the field which it is desired to protect, the inner side being as nearly as possible perpendicular, and eighteen or twenty inches in depth, the worms, after falling into it, cannot, if the soil be at all loose, crawl up the perpendicular side, and must either die of starvation, devour each other, or be killed in various ways, of which we have several to choose from. Dr. Durfee, of Fall River, informs me that he destroyed them by dragging a heavy stone roller over them, and crushing them, also by laying a quantity of shavings along the ditch and setting them on fire. Others have poured upon

them extract of tobacco, whale-oil, soap-suds, &c., with good effect. Hogs and turkeys are exceedingly fond of them, and it is probable that the former will destroy a great many in the pupa state, by turning them into the field after the crop is gathered, which will of course decrease their production the following season.

The second insect, of which I have received many specimens from Greenfield, Northfield, Sheffield, Worcester, and other places, is an *Aphis* or plant louse, belonging to the same family as those small green lice which are so numerous on tender shoots of various plants, rosebushes, apple trees, cabbages, &c., but apparently an undescribed species. It is a very small dark red insect, with six blackish legs and long antennæ of the same color, and may be found on the heads of wheat, and oats, between the grain and the stalk, sucking the sap through a long slender tube which is concealed beneath the body when not in use. The grain not receiving the necessary amount of nutrition, will naturally become shrunken and dry before fully ripe. These insects may be in a great measure killed by building small fires on the windward side of a field attacked by them, and throwing on wet straw, leather scraps or any other substance which causes a great amount of smoke without flame. A damp day, when the smoke rolls slowly along near the ground, should be selected for this operation for two obvious reasons; to prevent setting fire to the crop, and to allow the smoke to filter through the stalks before rising.

Among the specimens which were sent me of the heads of wheat, with this louse upon it, I find one or more of each of the three chief enemies of plant-lice from time immemorial, viz.: the "lady-bird," *coccinella novemnotata*; the green lace-winged fly, *chrysopa*; and the *syrphus*, a two-winged fly, which in its larva state, as well as the *chrysopa*, devours thousands of these pests annually, while the *coccinella*, in both the beetle and the larva state, lives entirely upon them. I am informed that the "lady-birds" are very numerous among these lice, and if so, they should be protected and cherished for the great good which they do in keeping in check these pests.

FRANCIS G. SANBORN.

Fitzwilliam, N. H., July 30, 1861.

MR. EDITOR:—I send you to-day a few heads of wheat selected from a field of three acres, sowed May 3d, on the west side of a hill in the vicinity of a mill pond. It was formerly cultivated and mowed, but has been pastured during the last four or five years. I broke it up this last spring, and spread a good coat of compost on it, made from my tannery, and also spread on it about fifty bushels of ashes to the acre. A large part of the field was almost destitute of vegetation, the grass roots having mostly died out, though there were some white or grey birches, and also wild cherry growing on a part of it. The wheat looks very well, but you will observe that the heads are covered with a little louse, or something of the kind, which adhere very closely and firmly around the root of the kernels. They are of various colors and sizes, though mostly bordering on a brown, and that appears to be the completion of them when arrived at a certain age or size; how they will look when they come to maturity, I cannot yet tell.

It is some four or five days since I first observed them, and I am unable to see that they have injured the wheat yet, but I am loth to believe that they mean it any good, though they may not yet be large enough to do it any injury; and perhaps will not at all. Can you or any of your readers give me any light about them, what they are, or what they intend or will be likely to do, and where they came from, and where they are going, or what they will become? &c., &c.

The most of our wheat fields in this vicinity are covered with the "varmint,"—are they generally so in the New England States? I have seen no one who has ever seen anything of the kind here before. If they mean evil, what can we do to guard against them or destroy them? Can we do anything?

I have another field containing about one and a half acres, sowed April 27, on an eastern exposure, on land that had been cultivated one year, which is now full in the milk, and on which I can find but very few of the lice, as I call them, which is very good. And still another acre, sowed May 9, on land cultivated last year, on which I find very few as yet; and still another field of half an acre, sowed on green sward about the middle of May, which is very stout; and this last is covered with the "varmints." This last has an eastern exposure. Last year I raised about five acres of wheat, but saw nothing of the kind.

A. S. KENDALL.

For the New England Farmer.

PROFITABLE POULTRY RAISING.

MR. EDITOR:—I see by your June number that "I. R. B.," of Brookline, requests a few additional items as to my success in making poultry so profitable. First, I have a good warm coop with four rooms; one with gravel and ashes for sitting hens; the middle room for feeding and roosting; one for chickens, till they are two or three weeks old before turning out doors; windows on the roof and sides; whitewashed every spring, and the droppings taken out every morning in warm weather, and in winter every four or five days. Nest boxes fourteen inches square, set on the floor, handy to be taken out for clearing and smoothing. Food, corn, oats, scraps, pounded shells, kept before them during the time the ground is frozen, and some kind of vegetable every day to take the place of grass. The place for rambling during the summer is about 45 by 52 yards, one-third of which is occupied for drying tan, the balance set with fruit trees, which a few years ago were nearly destroyed by the canker-worm, (which should be credited to the fowls as labor,) now nearly disappeared.

Salem, July, 1861. I. B.

POISONING RATS.—The following mode of preparing poison for rats is recommended. Mix it with corn meal, tie it in a small rag, making the parcels as large as a hickory nut, then grease the rag on the outside with lard, and place it near the burrows. The old rats will carry the poison to their nests to their young, and the whole family be destroyed.

OVER THE LINE.

In a "one-horse shay," and with an observing friend, we had the pleasure of crossing the line of our goodly Commonwealth into the State of New Hampshire, a few days since. Our principal object was to learn the proper season of gathering the seeds of the white and pitch pine trees, and the best mode of collecting and preparing them for use. A year or two since, a destructive fire swept over several hundred acres of woodland, in Concord, and the adjoining towns, which now lies nearly barren, as the partially burnt wood has been cut and carried away. The intention of some of the enterprising proprietors of this land, is to plow and sow it this fall with rye and the seeds of the white and pitch pine, and cover it once more with the forest.

The process to effect this desired result, from what we could learn, is to collect the seeds of the white pine during the latter part of this month, August. If a large tree can be found, filled with cones, they should be examined, and if the seed is perfect, an expert climber may ascend and cut off the limbs containing them, or clip off some of the cones with pruning shears on long handles. Or, the tree may be felled, the cones collected and laid away in some airy loft to dry. In this case, the tree should be peeled so as to preserve it in good condition for timber. When the cones are dry, the seeds may be threshed out in some careful manner so as not to crush the seed, that lies directly at the bottom of the scales, which will spread apart as the cone becomes dry. The seed of the pitch, or yellow pine, may be gathered at any time much later in the season, as they do not ripen till November. We have heard two or three observing persons remark that the white pine does not produce its seed constantly, but about once in seven years. It requires two years to bring a cone to maturity. They start out in June on the ends of the upper branches, and at the end of the season are two or three inches long, and of a fresh green color. In the next autumn they mature, and are usually five or six inches long. On a cultivated tree near our dwelling, we found plenty of cones last fall, many of which were eight inches in length.

The seeds of the white pine are about one-eighth of an inch in length, flattish round, and of brownish color.

The intention of the person who accompanied us, and whose land was burnt over, is to plow it, sow rye and harrow it in, and then sow the pine seed upon the freshly-harrowed soil, and leave it to take care of itself.

There is a large extent of now almost worthless lands in New England, which might be covered with a beautiful and highly valuable forest of pines in thirty years, if we had more persons of observation and energy, to start ahead in the work. Mr. B. F. Cutter, of Pelham, N. H., upon whose farm we spent a considerable portion of the day, and for whose kindness we are under obligations, has given this subject much attention, and we hope will favor our readers with a full account of the process of collecting the seed, and sowing it for the purpose of raising forest trees for transplanting.

If some one will show our people how, and excite them to make the attempt, the amount of valuable timber in New England fifty years hence may be double what it is at this moment, beside supplying the usual demand made upon it.

We wish to say to our brother farmers, that if they will imitate us in this day of recreation—and at the same time of research—they will find it one of profit to body, mind and pocket; but especially so to the mind. It opens to it new channels of thought, affords opportunity for a comparison of views in the occupation, and in the modes of management adopted. It creates new associations and friendships, and widens the circle of observation and objects for reflection while laboring in your own fields. A day thus spent in each quarter of the year cannot, in our opinion, possibly be spent so profitably in any other way. With your best suit, a good companion and a good team, no monarch at the head of his realm ever had equal cause for thankfulness and contentment.

For the New England Farmer.

WINTER WHEAT.

This being the last month of summer, and the time soon at hand for sowing winter wheat, you will allow me once more to say a word to our farming friends. Your New England States have nobly added to your grain record the past year. Your farmers have come to the wholesome conclusion not to travel beyond their own stone walls for the family flour. All doubt is now removed as to the wheat-growing capacities of your soil. Bear in mind the excellence of winter wheat over spring wheat, for white, good flour. Also bear in mind that winter grain ripens early, and that rust catches your spring grain in dog days. Also, that mischievous insects trouble spring grain more than winter.

In Maine, Vermont and New Hampshire, (on strong soil,) wheat should be sown the last week in this month. In Connecticut and Massachusetts, first week in September. Early sowing and good depth of root makes it safe against winter killing. Every farmer has more or less mowing land that needs to be turned over. Sod furrow is best for winter wheat. Immense are the acres of your exhausted mowing lands, that yield half to three-fourths of a ton to the acre, that can be rendered very profitable, even without manure, by sowing wheat. Soak the seed in salt pickle 12 hours, rake it in ashes, and in the spring sow ashes or lime over the field. At a safe valuation, your wheat is worth $35 to $50 per acre, and the

straw is worth double the hay crop. The orbs of some farmer may swell at this enormous statement, but I will stake my reputation for the truth of it. Wheat is always worth $2 a bushel to the farmer; the straw pays for cultivation.

Is not the insect spoken of by Thomas J. Field, of Northfield, the weevil? The winter wheat escapes it, from its being early.

Many are the reasons that should arouse your farmers to labor for an overflowing granary. Our cities are being emptied by civil war: sewing women, carpenters, merchants, draymen, all trades and occupations, are being driven out to their country friends. Already, it is a time of broken fortunes and broken hearts; Southern treachery and political traitors have bred and declared civil war; an honest yeomanry were never breeders of civil war, history tells no such black tale of them. Like the villain that would rob the church of its ornaments and burn the temple to conceal the theft, so have they robbed us of millions of private property, and now seek our blood and the overthrow of the government. Farmers, we trust you are not ready for the sacrifice. Your noble and sturdy regiments that daily, (almost,) pass through this city, show that there is a *will* to be executed, and a judgment to follow. Your factory villages, your workshops and tanneries, will cease to be busy. Butter, cheese, eggs and hay, will lesson in demand—but the principle of government or no government is being tested. Let us be patient—triumph is ours.

New York, Aug. 8, 1861. H. POOR.

THE RICHES OF A DROUTH.

Several very interesting experimepts which were tried by Prof. Higgins, go to show the action of drouth in bringing mineral waters from a depth to the surface of the soil. In one case he placed a solution of chloride of barium in the bottom of a glass cylinder, and then filled it with dry soil. After long exposure to the rays of the sun, the surface of the soil was tested with sulphuric acid, and gave a copious precipitate of sulphate of baryta. Chloride of lime, sulphate of soda, and carbonate of potash, were experimented upon in like manner, and upon the application of proper tests the surface of the soil showed their presence in large quantities, drawn up by the rising of water from underneath, as in the case of drouth.

The parched earth—all vegetation dwarfed and withered by the heat—seems suffering under a curse; but it is only an affliction for the present—"a blessing in disguise" for the future. "The early and latter rains" may produce at once abundant crops, but dry weather is needed to bring to the surface from the depths of the earth, where else it would be forever unemployed, food for future harvests. It is Nature's ordinance for keeping up the fertility of the cultivated soul.

But this is not the only way in which Nature converts drouth into a blessing. The rootlets of plants, unable to find their accustomed food in solution near the surface, are compelled to make deeper and more extensive investigations in search of sustenance. If the soil is deeply pulverized, and well underdrained, so as to prevent packing together and baking, these roots will travel astonishing distances, running away from the drouth. While the surface is kept moist by frequent rains, evaporation goes on rapidly, carrying off a great amount of heat, the subsoil is left cold and the roots are deterred from penetrating it. But when the surface becomes parched and evaporation checked, a genial heat is diffused through the lower stratum, and a warm invitation is given the fibres to descend—an invitation to dinner which they seldom decline.

Suppose now our wheat or corn plant, or even tree, has, by the pressure of circumstances, sent down its thousands of feeders, and become well established in its new quarters. It is not evident that it is in the best possible condition to meet every emergency? It laughs at the drouth and luxuriates in scorching days and sweltering nights. And when again the rain descends and refreshes the thirsty surface, our plant has a very important advantage over those whose roots lie near the surface, and are many of them shriveled and useless. It is provided with a double set of suction pumps, and makes a wonderful growth in a very short time.

Again, not only are valuable substances drawn to the surface by the moisture ascending during drouth, but the long roots which penetrate the subsoil, bring up and store near the surface the potash, lime, and other mineral elements. The roots themselves, after the plant has ripened, rot, and yield up to another crop what they have stored up. The great secret of the benefit of a crop of clover turned under, lies in the fact that it sends down very long roots, and many good farmers are of the opinion that the roots are of more value than the tops for manure.

But the most important of all the lessons we learn from drouth, is that a deep, light and porous soil is almost drouth proof. All the effect it has is to cause the plant to present its drafts to the bank lower down—the upper one may suspend, the lower one never does. It is not sufficient to plow beam-deep—if it is not properly underdrained the soil will pack so close and hard that the slender roots will fail to insinuate themselves into its confidence.

Keep your land light and mellow, to a good depth, by whatever means, and "the riches of a drouth" will certainly be secured in abundance.

TO PREVENT FLIES FROM TEASING HORSES.—Take two or three small handfuls of walnut leaves, upon which pour two or three quarts of soft cold water; let it infuse one night, and pour the whole next morning into a kettle, and let it boil for fifteen minutes. When cold, it will be fit for use. No more is required than to wet a sponge, and before the horse goes out of the stable let those parts which are most irritated be smeared over with the liquor.

EXCHANGING BOYS.—An exchange of farmers' sons is proposed by the *Homestead*. It is argued that it would prove mutually advantageous for a Massachusetts farmer's boy to exchange, for a season or two, with a Maine or a Vermont boy. Among other reasons it is suggested they would each act somewhat in the character of a "hired man," learn new processes, &c. &c.

TOP DRESSING GRASS LANDS.

Now is the time to commence the preparation of materials for this important work. Some persons doubt whether the application of manure to the surface of grass lands is the best mode of using it. This depends upon two or three circumstances, viz:

1. Upon the nature of the soil.
2. Upon the time of application.
3. Upon the condition of the dressing.

Top dressing will continue to bring a crop longer on a moist soil than on a dry one, first because such land is the best adapted to grass, and secondly, because the manure, by being kept moist, is brought into a state of decomposition, and becomes prepared as food for the plants, instead of drying up. Top dressings, therefore, for high lands, should be applied in the spring, as early as March or the first part of April, so as to receive the early rains, and get thoroughly leached, and the coarser particles washed down among the roots of the grass, before the hot and dry weather comes on. Or, it may be applied—and perhaps with better effect—late in November, where it will receive the later rains and be leached by them, or be covered with snow to be melted upon the dressing, and thus carry its fertilizing properties gradually to the grass roots during the winter and spring.

It is unpopular—we are fully aware—to recommend top dressing for high and dry grass lands; still we believe it to be a profitable way of fertilizing, when it is done judiciously. The error consists in cropping the land for many years, without manuring, until not only the fertilizing agents are exhausted, but the *roots of the grass themselves* have either died for want of food, or have been driven out by plants more hardy and persistent than themselves. When a field is in this condition, it is folly to top dress it. There is no basis upon which to act. The dressing was deferred too long—there is no recuperative power left. The remedy for such land is through the plow, manure, cultivation and *plenty of seed*, or all these, excepting the cultivation, which may be omitted by turning over the sod and laying down in August, or early in September.

In a wet season something may be done on high land by spreading fine compost manure liberally, scattering on grass seed and harrowing. Clover, sown early in April, in this way, will sometimes succeed well. If the farmer would be watchful, manure his fields in season, occasionally scattering a little seed over them, while producing liberal crops, he might save considerable expense in plowing and re-seeding. All this, however, should not prevent a judicious rotation of crops, and, in turn, bringing the grass fields into cultivated ones, which is undoubtedly the course that will secure the most certain profits.

The *time* when top dressing should be applied, is a question upon which our best farmers do not agree. What is needed, is a copious rain immediately after the dressing is spread; but as we cannot command this, we must exercise a sound judgment in the matter, and be content with the result. If the compost cart could follow that which carries away the hay, and a liberal shower follow, perhaps there would be no better time to apply the dressing; and in a moderately moist season, this course will succeed well. March, and early April are good seasons, but then the objection exists of cutting up the fields by the feet and wheels of the team. In the autumn there is little danger of this, unless the season be very wet, the more pressing work of the warm season is out of the way, and upon the whole, perhaps this is the best season for this operation.

The third point requiring care, is the condition of the dressing when it is used. It should be rich, that is, made of good materials, and fermentation not carried so far as to set free its gaseous properties, and then it should be fine—if as fine as sand so much the better. This will allow of its being spread evenly, and present such a surface to the rains and dews as to have every part of it quickly penetrated, and its fertilizing properties carried to the roots below.

For the New England Farmer.

CUTTING AND SEASONING TIMBER.

Much has been written and said in relation to cutting timber; of the durability of timber; of the condition and season when cut, as affecting its durability. This seems to me a waste of words and ink. Wood workers, from necessity, must and do cut their timber, most kinds and for most purposes, in the winter—and work all winter too, not regarding the changes of the moon or scarcely of the weather, in order sufficiently to stock their mills. It is true, timber might be cut in the fall and left on the ground to be drawn in the winter, but wood workers do not operate on that plan at all. Hemlock must, of necessity, be cut when the bark can be taken off. Hemlock is sometimes cut in winter and the logs peeled in the ensuing summer, but I doubt if there is a man in all New England who knows in which case, if either, the lumber is the more durable.

Timber of all kinds, cut at any season of the year, will be injured more or less if suffered to remain in the log with the bark on, exposed to the sun and weather during summer. But manufacturers don't let their logs lie about all summer, except in hard times like these. I am not prepared to say at what time timber contains the most sap, but I know that it contains a large amount in winter, and when cut then, retains it in the log all summer; and I find by actual and accurate experiment, that birch, sawed into pieces 4 feet wide by 1½ inches square, and left stand-

ing on end, has lost over 24 per cent. in weight in 12 days, (under cover this month, July.) I find also, that other samples average a loss of 27 87-100 per cent., the greatest loss, (being longer drying,) being 32 8-10 per cent.

Thus it will be seen that birch and beech will lose nearly one-third in weight by becoming seasoned. A cubic foot of green birch will weigh 64 pounds, (a little more than water, 62½ pounds.) A cord 8,192 pounds. A superficial foot 5.33 pounds.

WOOD WORKER.

Marlow, N. H., July, 1861.

For the New England Farmer.

REMARKS ON CLIMATE.

CONCLUSION.

Upon the premises stated in my first letter, I will try to analyze a few of the most prominent elements in the world, and show the cause of their stability or instability. The North American continent has a variety of climate, different from all other parts of the world, because its ranges of mountains and valleys are different. In the older portions of the continent exist lofty mountains, and these skirt the shores of both oceans, while between these two portions of our continent exists a newer portion of land, which, after the mountains were raised above the sea for a long time, was covered with the waters of the ocean, and became a regulator of climate between the Gulf of Mexico and the Arctic Ocean, carrying the waters of the gulf to the Arctic Ocean through this channel, instead of the bed of the Atlantic, where the Gulf Stream now runs; giving our continent an entirely different climate from that now existing. At the commencement of the Tertiary Period, Sir Charles Lyell informs us, that the Gulf of Mexico extended to near the site of the present city of St. Louis, and for more than a thousand miles, the land has been formed since the beginning of the Eocene Period, till its surface has assumed its present form. In the Carboniferous Era, the polar regions probably enjoyed a mild climate, as the tropical waters leaving the Gulf of Mexico passed through that portion of our continent between the Rocky Mountains and the Alleghany range, pouring the tropical waters into the Arctic Basin, and forming a climate of sufficient warmth and humidity for the production of an enormous vegetation. Remains of that vegetation exist there at the present day. The skating parties of Capt. McClure discovered on the north of Banks' Land a range of hills composed of one entire mass of wood in every stage, from petrifaction to a log fit for firewood! Many trees were among it, but were too much decayed to stand removal. In the vicinity the bones of musk-oxen and deer were found.* This shows conclusively that a milder climate once existed there. The existence of coal has also been discovered there. But a later upheaval has disunited these waters, and produced a mighty change in climate, not only on this continent, but in Europe. As our continent now exists, the changes in the temperature of the weather must forever be enormous. From the extreme heat of summer to the extreme cold of winter, the change is probably beyond the extremes of any other part of the world. I am speaking now of that great plain existing between the Alleghany and Rocky Mountain ranges. The under current of air passes freely without any obstructions from the Gulf of Mexico to the Arctic Ocean, and from the Arctic Ocean to the Gulf of Mexico. These two opposite currents of air are capable of producing enormous vicissitudes in the climate of that otherwise lovely valley. It is subject in summer to a tropical climate, and in winter to an Arctic one, while, at any time, a sudden change of wind may produce a contrary effect in a very short time. The lower current must necessarily come from north or south. And the tropical wind from the eastward is frequently deflected by the highlands west of the Gulf and the Rocky Mountains, carrying the heat of the warm waters of the Gulf of Mexico through this immense valley, while the Arctic winds are conducted south by a similar cause. When this valley was submerged, the Gulf Stream did not exist in its present channel, but flowed through this valley. Then England, and the west of Europe, would have had a climate like the present climate of Labrador, had not other conditions operated more favorably. Then Labrador had a climate more delightful than the present climate of England.

As I said before, the climate of America is governed by different laws from the climate of the eastern continent, because its physical geography is different. The western winds, as they pass over the Pacific Ocean, bring the heat of the waters on the western coast, forming a most delightful climate, varying but little in temperature from 30° to 45° of latitude, having the summer temperature of New York city, 40° 45′ latitude, of 70° heat. The annual mean temperature of Nantucket in latitude 41° 17′ is represented by the isothermal line of 50° temperature; it strikes the Pacific coast at 48° north latitude, 15° further north on the Pacific coast than on the Atlantic. The winter temperature of Virginia in latitude 36° 30′ is represented by the isocheimal line of 40°, and strikes the Pacific coast in latitude 49° 13′ further north than on the Atlantic. The isotherial line or lines of equal summer heat, attain their highest point of latitude at 110° west longitude, and their lowest on the Pacific coast. The isocheimal line or lines of equal winter temperature are highest in latitude on the western coast, and lowest at from 90° to 95° west longitude. This is the longitude of Louisiana, Arkansas, Missouri, Iowa and Minnesota. This shows that those States are a little colder in winter than the same parallels of latitude on the Atlantic coast, and much colder than on the Pacific. The lines of summer temperature commence rising from the Atlantic coast gradually to about 90° to 95° west longitude, then they rise abruptly to the Rocky Mountains at 110° west longitude, their maximum height. This shows that from 90° west longitude, the extremes of heat and cold increase far into the valleys of the Rocky Mountains, while on the west side of the mountains the coast climate varies but little from 30° to 45° of latitude. There is but little variation in the annual and winter lines of temperature from the Atlantic coast to 90° west longitude, yet the temperature rises quite rapidly in the Southern States, while from Long Island, it rises rapidly to Troy, N. Y., and then passes a little south of west through Lake Erie, when it

* Annual of Scientific Discovery for 1854, page 316.

begins to rise again. Facts go to show that the great lakes have considerable influence on the climate of the surrounding country, having a cooling influence in summer, and mitigating the cold of winter. The current of westerly winds as it passes over the Pacific Ocean, brings warmth to the western coast, but in rising over the Rocky Mountains, it loses a portion of its heat by its expansion, and in passing ridge after ridge, it imparts the greater portion of its heat to the soil below, and when it leaves these mountain ranges, it is dry and cold. When it comes to earth again, it brings down the cold temperature of the upper regions, whose chilling influence is felt in the Mississippi valley, frequently in the cold months of winter. This wind brings no rain. All the rain or snow that falls in this valley is brought in the under current from the Gulf of Mexico, or from the Arctic Ocean. These currents are frequently deflected eastward by the upper current, carrying the waters of the gulf to feed the great lakes. On the western border of this valley, near the Rocky Mountains, these westerly winds drive most of the gulf winds eastward, so that there exists a broad belt of treeless desert, so sterile that it is valueless to man for purposes of agriculture. The upper current frequently mingles with the lower, before it reaches New England, lowering its temperature, and sending its chilling rain and snow upon our hills as a memento of its mighty force. The under current on the Atlantic coast, known as the sea breeze, in passing over the cold polar oceanic current along the coast, must impart a chilling influence on the land, especially through the New England States and British Provinces.

Our continent is closely connected with the polar lands. There is no large open sea between us and the pole, for oceanic currents to pass over and regulate the climate. Our north and north-east winds sweep over an immense territory of land, which cools them down below their natural state. The principal pole of greatest cold, or the magnetic pole, lies in latitude about 77°, and about 100° west longitude, at, or near the place where Sir John Franklin is supposed to have been lost. It is on Grinnell Land, a little north of the Georgian Isles. The line of variation passes through the Mississippi Valley, according to the U. S. Coast Survey, about where we find the greatest extremes of heat and cold.

On the eastern continent we find the great westerly current of air warmed up by the waters of the Gulf Stream as it passes over the western part of Europe, giving a climate on the coast much like the climate of California. This climate grows colder as we pass from the coast, because the land cools the westerly current of air before it leaves the European soil. Southern Europe from the Mediterranean Sea to the parallel of 50° north latitude, appears to have undergone mighty changes in ages gone by. Mountains are raised in many directions, but the chief ranges lie in an east and west direction, or at right angles to the mountains of America. Here, amid this universal "wreck of matter," rear the lofty heads of the mighty Alps, far into the regions of perpetual snow. On the south side lie Italy and Greece — those lands celebrated for works of art and classic lore, whose bright skies and green hills lend enchantment to the view.

The air in passing over the Mediterranean, attracts heat and moisture from its waters, which makes it one of the most agreeable climates on earth. North of these mountains the climate gradually grows colder after leaving the coast, to the eastern bounds of Europe, according to the law of nature, which is based on the cooling properties of land. Here the westerly current passes over the Ural Mountains into lands almost wholly unknown to us. Here are the cold regions of Siberia—the great Steppes of Asia, hemmed in on the south and east by lofty mountains, and open to the Polar Sea. If there is a cold climate on earth, it is here. If there is a climate uncongenial to the march of civilization, it is here. Even the climate of Labrador is more genial. The only condition to mitigate the cold is the Polar Sea, and were that sea transformed to land, the whole country would be uninhabitable. Were we favored with such a sea at the north of our continent, we should enjoy a far milder climate than we do now, for other conditions are far more favorable. The Great Altai Mountains shut out that region from the influence of the Pacific Ocean, and the Ural Mountains on the west, over 5000 feet high, act as a refrigerator on the westerly current of air. The country south of this from the Great Altai Mountains in the north, to the Himalayas on the south, has all the variety of climate from the Arctic to the tropical, and the soil has every degree of fertility, from the most perfect desert to the most fruitful of all lands. It is a region which indicates great geological disturbance. These are a continuation of those mighty ranges of mountains which commence at the Rock of Gibraltar, and pass through Spain to the Pyrenees, and through the volcanic region of France to the Alps, through Turkey to the Caucasus, and through the north of Persia to the lofty heights of the Himalayas, then through the south of the Chinese Empire to the ocean. North of these, the mighty forces of nature have raised innumerable chains whose lofty summits are covered with perpetual snow.

South of these great chain of mountains lies a tropical climate extending considerably into the temperate zone, while the most southerly point of the continent lies north of the equator. Here lies the Burman Empire, Hindostan, Persia and Arabia. Here is the southern slope of Asia, with a climate whose temperature is as much above that due to latitude, as the climate of Siberia is below. The warm winds from the Indian Ocean carry an immense amount of heat and moisture over the eastern portion of these fertile lands. Arabia receives but little wind or moisture from the ocean, but is a land of calms and conflicting winds, mostly of its own raising; from its intense heat, which causes those parching winds called the Sirocco, and in consequence of these conditions, the whole country is almost an entire desert.

The Continent of Africa is so little known, that it is almost impossible to give a description of its climate. Its physical geography is so obscure, that the causes that govern the climate are but partially understood. The north part, beyond the influence of the Mediterranean Sea, is a complete desert. It lies in the belt of calms and conflicting winds, and those are raised only by its intense heat, and bring no rain from any quarter. Even in the fertile region of Egypt, it seldom or

never rains, yet the soil is kept fertile by the inundations of the Nile. On the west of Egypt, lies the great desert on which rain never falls, and on which all climatic conditions are forbidding. On that belt of land from the Persian Gulf to the Atlantic Ocean, there are no conditions favorable to fertility. There is no other part of the globe where conditions are so unfavorable to fertility as in this vast and partially unknown country. South of this on the eastern coast the conditions of fertility are favorable as far as regards the winds. If there is a very lofty range of mountains near the eastern coasts, there may be a desert region in the interior, but if those mountains are not lofty, it is more probable that those regions possess a fair proportion of fertility

D. BUCKLAND.

THE FLAIL.

BY ANNA L. ANGIER.

A song for the flail! the smooth-handled flail,
As stroke after stroke it comes down;
While the golden grains fly, wheat, barley, or rye,
The toil of the farmer to crown.

The useful and useless he thus will divide;
And gathering each in its turn,
The former with care, for the garner prepare,
The latter he'll scatter or burn.

And what is earth more than a great threshing-floor,
With the wrong and the right thickly strown?
But Truth's iron flail, them both shall assail;
To the winds then shall falsehood be thrown.

—*Boston Recorder.*

EXTRACTS AND REPLIES.

A WINE PRESS—CURRANT BUSHES—INSECTS ON CABBAGES.

Can you inform me where and at what price, a press which will remove the juice from currants, for the purpose of making wine, can be obtained? I suppose there are different sizes and kinds of them. I should want one of small size for family use, but of good strength and quality, and one which will do its work effectually.

At what distance should common red currant bushes be set in fields to grow in the tree form?

Will ashes or lime prevent the depredations of lice and other insects, or of worms on cabbages? Is it best to sow seed to raise cabbages in the hills, or in beds to transplant?

A MONTHLY READER.

Franklin, July, 1861.

REMARKS.—Such a press as you inquire for can be purchased for $5,00. But do you need it? Nothing is more simple, or, scarcely more easy, than to mash the currants with the hands, as the women mix bread. A bushel of them may be mashed in a very few minutes. Then take a large linen or tow towel and wring the juice from the pulp, not being particular to wring it very dry. A gentleman who has been making currant wine for thirty years said to us, the other day, that, having used the press and the hands, he should employ the latter, although the press stood directly by him.

Currant bushes in fields should be set five or six feet apart, if they stand in clumps, or clusters, so as to leave room to cultivate with a horse where the bushes have considerably expanded themselves. It is well enough to cultivate the currant in the tree form, as a matter of fancy in the garden,—but, as a matter of profit, we think four times as much may be realized in the bush, as in the tree form. Beside, as bushes, they perpetuate themselves, for many years, while as a tree, when the single plant dies from age or injury the hill is entirely gone. We speak from experience, having tried both ways for several years.

Ashes and lime both prevent, in some measure, the depredations of lice on cabbages, though they may not be effectual. They are excellent in promoting the growth of the plants. There is no difficulty in making transplanted cabbages live, if they are taken up when quite small. If they are not more than two inches high when removed they are more certain to live and make a good growth than when left to grow larger before being transplanted. It is a good plan, however, to sow in hills, scattering the seeds considerably, and at the proper season of pricking them out, leave but one plant in each hill.

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THE ARMY WORM.

On Saturday last, my attention was called by an intelligent observer to a worm about an inch in length, and very numerous, almost covering the earth in the particular locality in which they were seen, which was low, marshy ground. I was informed that a similar worm had appeared in other places in this neighborhood. They were gradually advancing towards the brook, near the tanneries of our village, one of which is occupied by my son. I picked up half a dozen of these worms, and placed them in a vial, and filled it with grass. They appeared to eat as though they had no time to spare, and soon devoured it all. It has been replenished half a dozen times since. Now only two worms are to be seen. What has become of the others, I know not—unless they have been eaten by their companions. These are all the facts I have witnessed. I presume they are they same worm that has made such destruction in fields of grass and grain in other places; but must leave to others to tell what they know about them. It is important that their habits should be observed and recorded. J. W. P.

South Danvers, July 31, 1861.

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THE ARMY WORM.

The army worm, as it is supposed, has made its appearance in immense numbers on a field of oats belonging to Mr. Benj. Porter, in this town.

Any information showing how they may be exterminated, or their ravages stopped, will be of great advantage to our people.

I learn that a train of guano laid round a field will prevent them from entering it, and judging from what I have seen, it is very distasteful to them, to say the least. C. P. PRESTON.

Danvers, July 30, 1861.

TOADS AND BLOODY MILK.

I used to be told when a boy, not to kill toads and frogs, as it would make the cows give bloody milk—but I did not suppose that any one really believed it, until lately, I have met with two or three that professed to believe in it. The idea always appeared ridiculous to me, and does now; but they have so much faith in it, that I take the liberty to ask you to give your opinion of it, and should like the opinions of your readers, if any are willing to say what they think of it.

Conway, July, 1861. AN INQUIRER.

REMARKS.—Yes—we believe in it, in this way—and in no other. Any person who will throw clubs and stones at toads, frogs, and other useful creatures, and wantonly murder them, will be quite likely so to abuse their cows as to make *them* give bloody milk!

TO DESTROY FLIES.—To one pint of milk add a quarter of a pound of raw sugar and two ounces of ground pepper; simmer them together eight or ten minutes, and place it about in shallow dishes. The flies attack it greedily and are soon suffocated. By this method, kitchens, etc., may be kept clear of flies all summer, without the danger attending poison. It is easily tried.

I found the above in last week's *Farmer*, and tried it. But it won't do. My kitchen and dining-room are overrun with flies of the most impudent and adhesive breed; and when I saw the foregoing receipt for their mortality, I really felt a glow of happiness. I tried it, as I said. But instead of the "insects attacking the mixture" greedily, they buzz around it with contemptuous indifference, and light on everything else, as if to show their disgust to this particular *pizen*. I have not got a single fly into any of the shallow dishes that are lying around baited with the exterminating fluid. It's a humbug.

If you know anything that *will* fascinate and kill flies by the million, do let us have it, and receive the endless gratitude of

A THOUSAND HOUSEKEEPERS.

REMARKS.—The common "fly-paper" of the shops will destroy a great many; so will a tumbler of sweetened water, covered with paper with a hole in its centre. But the true way to keep flies out of the kitchen, is, to have as little as possible about that they can eat—then keep the room dark by closing the blinds, or by other contrivances, leaving a small space open somewhere to admit the light, so that when a fly does enter he will pretty quickly make for the light and pass out. The room need not be made so dark as to make the necessary labor there unpleasant. We are rarely troubled with flies in the kitchen, or in the horse stables.

SEX IN EGGS.—A correspondent of the *London Field*, talking on this subject, says: In all eggs, whether of poultry or pigeons, there is to be found an indentation, resembling the dimple in the chin often to be found in our own sex, in the round end of the egg. This mark will always be found directly on the top or to the one side of the round end of the egg. If the breeder wishes to select eggs for hatching cock birds let him pick those having the dimple immediately on the top of the egg, and if for hens let him choose those eggs with the dimple to the one side.

A PREMIUM FARM, AND THE MAN WHO OWNS IT.

We find in the New Hampshire *Journal of Agriculture* the following "statement" of the farm to which the Hillsborough North Agricultural and Mechanical Society awarded its first premium last fall; and in another column of the same paper, a brief history of the man who owns the premium farm. We put them together, and commend them particularly to the attention of young farmers.

The farm which I offer for premium, lies in the east part of Deering. It is quite level, and for the most part rather moist. It contains 165 acres, divided as follows: 36 acres mowing, of which 25 acres are arable; 84 of pasturing, and 45 of woodland. Cut about 35 tons English hay and three meadow. We usually break in the spring for planting, and plant two years—the third year sow down to grass—with wheat and no manure. We plow in the new manure, and put the old in the hill.

Our corn averages about 35 bushels per acre. Potatoes of late years, 125. We raise from 75 to 120 bushels of carrots, besides ruta bagas, sugar beets, &c.

We think roots very profitable to raise, and *wonder* that more farmers do not raise a *few*. We think one year's trial will insure a larger crop for the second. Farmers, try them.

We have underdrained some in one field, and think it pays well. At last we have learned how to reclaim our worthless bog holes, and make them the most productive of any acre on the farm.

The farm is well walled, and bushes kept down. When I moved on the farm, every acre of the field was covered with stone-heaps, from 25 to 40 per acre, and now not one is found in the mowing.

HEROD CHASE.

I would say a word to those that think farming is a hard and a slow way to make money. It is so; but it is a safe way. I will tell you how I begun. I was bound out at the age of 14 years until I was 21 for $100, and learn to read, write and cypher as far as the single rule of three, and learn the trade of a farmer. At 23 I married. At that time I had added $200 more to the $100. I moved home with my father-in-law, on to a farm of 100 acres, somewhat out of repair. I then purchased a pasture, for which I paid $800, which brought me in debt $500. I carried on said farm eight years, at the halves, giving him one-half of the income of my pasture for the income of one-half of his stock. At the expiration of eight years he died. From that to the present time, I have had three-fourths of the income, paying my mother-in-law one-fourth. During that time, I have improved the farm, kept the buildings in repair, attended meeting regular, always paid the printer in advance, and purchased a farm of 120 acres,

for which I paid $1400. I am now out of debt, and have some money to let—besides having $400 stock in the Central Railroad, as a permanent fund. I wish some of my good railroad folks would pity me enough to give me one free ride.

What I have saved, I have made from the farm. Try, young man, and do better than I have done. You can do it, only set yourself about it in good earnest; not say I *can't*—never say that until you *try*.

Enough, at this time. HEROD CHASE.

SAVE YOUR SEEDS.

There are many kinds of garden seeds, wanted in small quantities, that may be more cheaply purchased at seed stores than raised at home. There are others which every farmer or gardener may raise and save for himself. Provided the work is well done, the more that each one saves for himself the better; for he may not only secure any excellent or favorite variety, and be sure of having the genuine sort, but he may also be sure that his seeds are fresh, and not a portion of old mixed with new, as often happens when he obtains them from irresponsible sources.

Always select the best seed where the supply is abundant. If earliness is desirable in the variety, take those which ripen first. This will be necessary in order to maintain the character for earliness. The tendency is to run back, and this will be the result unless pains are taken to prevent it. Such selection will also afford a chance of not only maintaining, but improving the quality. The same care must be taken to secure any other point, as size, excellence of flavor, productiveness, &c. Always take the best.

There are some seeds which farmers pay considerable sums for, which they might as well raise for themselves. We do not allude to corn, wheat, &c., which should not only be home raised, but which should be as carefully selected for improvement as garden seeds, but to smaller seeds, such as carrots, for example. These may be had of excellent quality by setting out the finest roots, and saving the finest central bunches of seeds. Parsnip seeds are easily raised, and the field crop is valuable.

The seed of all crops, when ripe, and before they begin to scatter, should be cut, tied in neat bundles, distinctly marked, the name and date, and placed in a dry apartment. When quite dry they should be threshed or shelled, and neatly put up in cotton or paper bags, and placed beyond the reach of depredators.—*Country Gentleman.*

SPRING WHEAT.—Our correspondent, THOMAS J. FIELD, Esq., of Northfield, has sent us a head of spring wheat which is infested by a very small insect of the fly kind, which, he says, are on the wheat of every field he has seen. The winter wheat has escaped as yet. We have had no account of this from other sources, and hope that it will not become general, or prove destructive in any locality. He does not state that the wheat is destroyed by these flies.

GUNPOWDER.

A member of the British Parliament said, not long since, that the quantity of sulphuric acid used by a people was a pretty good index of their degree of civilization. It is somewhat so with gunpowder. The common supposition is, that, during a war, large quantities of gunpowder are used more than are wanted in times of peace. But this, we understand, is not the case,—and it shows how a state of war disturbs all the arts of peace, entering into their minutest ramifications, and affecting them in one way or another. Not a basket or broom, a plow or hoe handle, a steam engine or a pin or needle are now made without their price being in some way affected by the war in our land.

In the arts of peace, powder is employed in a hundred forms, and the aggregate consumption is very large, calling for an amount vastly greater than is demanded by all the armies in the world. These arts are now affected, many of them entirely suspended, and the consequence is, that less powder is used than when we are in a state of peace!

We have recently spoken with two or three powder-makers on this subject, whose opinions are all alike in relation to it. One of them stated that a single mine in Pennsylvania would consume more powder than all the regiments of New England.

What a comment upon the destructive tendencies of War! It not only tends to demoralize the people, but destroys life, devastates countries, crushes other arts, paralyzes the sciences and literature, and shakes the very foundations of our social and national existence.

For the New England Farmer.

NOTES AND INQUIRIES.

The spring, and indeed most of the summer, so far, was wet and cool, consequently vegetation was backward, yet crops in general look remarkably well. But little winter wheat is sown; spring wheat will be abundant. A large breadth was sown, and it looks very well. Other grain is also heavy; the yield will probably be as great as last year, the wheat crop will be greater. Corn will be rather light, unless we have a very favorable autumn. Fruit is scarce, except some of the smaller varieties. Currants and raspberries are plenty. I have as fine currants as I ever saw, growing on bushes set in the spring of 1859. Some strings have thirty full-grown ripe currants on them, and from twenty to twenty-five is the usual number. I suppose them to be the Red Dutch variety. I have also two varieties of White Currants, the White Grape, very fine, and a smaller variety of a yellowish color. Are they the White Dutch? One year ago last spring, I bought four currant bushes of a man calling himself a nurseryman, for which I paid him one dollar. He recommended them very highly,—

said they were the Red Grape, and the White Grape. They bear this summer, and prove to be very inferior fruit, probably some old native bushes which were begged or stolen, to supply orders. Others were equally cheated. Perhaps it will teach us better than to purchase trees of travelling, irresponsible venders.

What will destroy slugs on pear trees? I have a few nice trees, two of them dwarfs, that are nearly divested of foliage by them.

L. VARNEY.

Bloomfield, C. W., 7th Mo. 30th, 1861.

REMARKS.—It is said that washing with whale oil soap will kill the slugs; we have never found any certain remedy except the thumb and finger.

THE TRADE IN TOADS.

None but Frenchmen, of course, would ever think of making a regular business of trading in these brown-coated gentlemen, and accordingly we find the trade flourishing in Paris alone. Toads, for some years, have been the indispensable allies of the French market gardeners, cultivating rich and moist grounds. Many of these men fill their gardens with them to get rid of a throng of insects injurious to the vegetables they have raised by laborious and scientific culture. Especially do toads attack and demolish the slugs and snails, which, in a single night, utterly destroy the commercial value of lettuce, carrots, parsnips, asparagus, and even early fruits. In having recourse to these singular auxiliaries, the French gardeners imitate their English brethren. A great portion of the vegetable supply is derived from the kitchen gardens in the immediate vicinity of that immense city, cultivated, it is said, by 35,000 persons. These gardens are a perfect marvel of laborious culture. You see sometimes acres and acres covered with hand-glasses. Richly manured, and sedulously tended, some of these garden spots are so managed as to yield five crops annually. Not only is there not a weed among them, but the vegetables are examined with lenses to detect mildew and fungi. Besides toads, which they pay six shillings a dozen for, they make use of fowls to destroy the aphides, rigging them with boots to prevent their scratching, and allow them the use of their bills. The price of toads is lower in Paris than in London; in the former city they are still sold, notwithstanding the demand, for about fifty cents a dozen, and many are exported to England. The dealers in this strange commodity keep them in the bottom of huge casks, into which they are constantly plunging their bare hands and arms, without showing the slightest fear of the liquid secreted by the toads which science has sometimes pronounced venomous. Busy little fellows these repulsive looking creatures are, and worthy of all possible encouragement and patronage.—*Exchange.*

WILLOW WARE.—The editor of the Wisconsin *Farmer*, in acknowledging a present of a willow basket, manufactured in that State, says that the soil of the West is the best in the world for growing willows.

THE DEW.

The following quotation from Dr. Wells on dew is highly instructive: "I had often smiled in the pride of half-knowledge at the means frequently employed by gardeners to protect tender plants from cold, as it appeared to me impossible that a thin mat or any such flimsy substance could prevent them from attaining the temperature of the atmosphere, by which alone I thought them liable to be injured. But when I had learned that bodies on the surface of the earth became, during a still and serene night, colder than the atmosphere, by radiating their heat to the heavens, I perceived immediately a just reason for the practice which I had before deemed useless. Being desirous, however, of acquiring some precise information on the subject, I fixed perpendicularly in the earth of a grass-plot four small sticks, and over their upper extremities, which were six inches above the grass, and formed the corners of a square whose sides were two feet long, I drew tightly a very thin cambric handkerchief. In this disposition of things, therefore, nothing existed to prevent the free passage of air from the exposed grass to that which was sheltered, except the four small sticks, and there was no substance to radiate downward to the latter grass, except the cambric handkerchief. The sheltered grass, however, was found nearly of the same temperature as the air, while the unsheltered was five degrees or more colder. One night the fully exposed grass was eleven degrees colder than the air, but the sheltered was only three degrees colder. Here we see the power of a very slight awning to avert or lessen the injurious coldness of the ground!"

CORN IN THE EAR.

A very intelligent Irishman tells the following story of his first experience in America:

I came to this country several years ago, and as soon as I arrived, hired out to a gentleman who farmed a few acres. He showed me over the premises, the stable, cow, and where the corn, hay, oats, &c., were kept, and then sent me to get my supper. After supper he said to me:

"James, you may feed the cow, and give her corn *in the ear.*" I went out and walked about, thinking what could he mean? Had I understood him? I scratched my head, then resolved I would inquire again; so I went into the library where my master was writing very busily, and he answered without looking up, "I thought I told you to give the cow some corn *in the ear.*"

I went out more puzzled than ever. What sort of an animal must this Yankee cow be? I examined her mouth and ears. The teeth were good, and the ears were like those of kine in the old country. Dripping with sweat, I entered my master's presence once more.

"Please sir, you bid me give the cow some corn *in the ear*,—but didn't you mean in the *mouth?*" He looked at me for a moment, and then burst into such a convulsion of laughter, I made for the stable as fast as my feet could take me, thinking I was in the service of a crazy man."

WHILE there is so much within us to make war upon, it is gratuitous to commence a war with exterior enemies.

For the New England Farmer.

RETROSPECTIVE NOTES.

CORN COBS AND COB MEAL.—Such is the caption of an article in the July number of the *Farmer*, well deserving the attention and candid consideration of all farmers, and of those more especially who still continue to practice a mode of feeding, which was, a few years ago, much more common than it is now. I refer to the practice of grinding corn and cobs together, and feeding the meal; and it is because this practice is neither safe nor economical, but, on the contrary, often injurious, and always dangerous as well as wasteful, that, as it seems to us, this article by Mr. BASSETT, (see *N. E. Farmer*, July, page 301,) is well deserving of attentive and unprejudiced consideration. It deserves consideration, because it contains several sensible remarks upon a practice which has a bearing both upon the pecuniary interests of farmers and upon the comfort and health of their stock; and it deserves unprejudiced consideration, because, whether they are sensible of the fact or not, there are a good many who make it abundantly manifest either by tongue or pen, that they have very strong prejudices in favor of the practice which the writer of the article under notice has discontinued for very good and sufficient reasons.

Hoping that all concerned will give to the excellent article of Mr. BASSETT, (*N. E. Farmer*, May 25th, and July number, page 301,) such consideration or re-consideration as we have named, and that many, like Mr. B., may be converted from the error of their way of feeding, we feel as if we might do some little service, especially in the case of such as may be hard to be convinced, by submitting a few facts and considerations in addition to those of Mr. B., or in confirmation of the same.

The first noteworthy thing about the article under notice is, that the writer, Mr. B., does not belong to that class of farmers who, having once adopted some particular mode of practice, stick to it, right or wrong. Mr. B. says, "It used to be our custom to feed a considerable portion of our corn in the form of cob meal." This custom, however, he at length gave up; and among the reasons for this change Mr. B. names the following:

1. It is too expensive. The force of this reason would have been more manifest, if Mr. B. had stated what seems to be, by the general acknowledgment of those who have chemically analyzed cobs, the small amount of nutritive matter contained in them. Cobs, according to the general estimate, contain no more nutritive matter than wheat straw; and certainly, if all millers charged at the same rate for grinding corn and cobs together as that at which the "entirely honest" miller employed by Mr. B. charged him, it would, indeed, be too expensive to grind the cob with the corn. "The last time," says Mr. BASSETT, "that I had corn ground in the ear, I measured six bushels in my half bushel, which would not have yielded over three bushels of shelled corn, and carried it to a mill whose owner has the credit of being entirely honest. This was then passed through the 'cracker,' and according to his measure made seven bushels, for grinding which, I was charged forty-two cents, or twenty-four cents for grinding the cobs." Truly may Mr. B. say that grinding cobs at this rate is too expensive, inasmuch as it requires no chemical analysis, but only a little common sense, to become convinced, that a bushel of cobs cannot be made, by mere grinding, six cents better than when unground; and it must seem very doubtful that a bushel of them is worth six cents in any form whatever.

At this rate of charging for grinding, the cost for grinding a ton would be about six dollars. Of this any one may satisfy himself by a little calculation. A bushel of cobs will weigh, on an average, about twenty pounds (20 lbs.,) and a hundred such bushels will make a ton, and at the rate of six cents a bushel, a ton will cost exactly six dollars. What unprejudiced, what judicious and well informed man would give six dollars for grinding a ton of cobs? There are, indeed, several other articles of fodder, of which six dollars' worth would go much farther than a ton of cob meal. And even if cobs could be ground at three cents per bushel, or three dollars per ton, we would prefer to have three dollars' worth of something else, and let the stock have access to the cobs in the crude state, in which form they will eat a few occasionally, and quite probably as many as will do them any good.

2. The second reason alleged by Mr. B., for giving up the practice of grinding corn with the cob is, that, in some cases, it produces constipation. He might have found in the records of the experience of others, if not in his own, instances of far more serious consequences than simple constipation, for there have been scores, if not hundreds of cases recorded, in which death was clearly attributable to the use of cob meal. And what wonder! Let any one examine a hard, fully matured cob, and he will find flinty, hard, sharp, glossy scales between the kernels, and adhering to the cob, which no common grinding can reduce to powder, or deprive of their sharp edge. These being, many of them at least, as hard and as sharp-edged as a knife, cannot go through the bowels of any animal without risk of producing wounds in the tender lining membrane, or irritation, or inflammation, either fatal or severe. And such results have actually taken place. Mr. S. E. TODD, author of "The Young Farmer's Manual," mentions cases in which streaks of blood were voided, and several instances of other injurious and even fatal effects—all clearly proved to be results of these hard, flinty, sharp-edged scales.

Did time and space permit, we might submit still a few other considerations as a supplement to Mr. B.'s article, and in furtherance of his benevolent purpose. Should occasion seem to require it, the subject will be resumed.

MORE ANON.

HOW TO CUT GLASS WITH A PIECE OF IRON.—Draw with a pencil on paper any pattern to which you wish the glass conform; place the pattern under the glass holding both togehter with the left hand, (for the glass must not rest on any plain surface,) then take a spike or piece of iron, heated, and pass it slowly forward and the edge will immediately crack; continue moving the iron slowly over the glass, tracing the pattern, and the clink in the glass will follow at the distance of

about half an inch in every direction, according to the motion of the iron. It may sometimes be found requisite, however, especially in forming corners, to apply a wet finger to the opposite side of the glass. Tumblers or other glass may be cut or divided very fancifully by similar means. The iron must be reheated as often as the crevice in glass ceases to flow.—*Scientific American.*

CARBONIC ACID GAS.

Carbon is found in a variety of forms. Common charcoal, soot, lampblack and the diamond, are all forms of this valuable and important element. Wherever carbon is found in minerals, it always exists as a product—mediate or immediate—of organic action. The deflagration or decay of wood, and the putrefaction and decomposition of all organized structures which have acknowledged the vivifying principle of life, produce carbon, which, combining with the oxygen of the atmosphere, forms the substance known as carbonic acid. This is a heavy gas—extinguishes fire, and destroys animal life. "If an animal attempts to breathe it pure, there is a spasmodic closure of the glottis, and the animal dies as speedily as if strangled with a cord. If breathed when diluted with ninety per cent. of air, it acts as a narcotic poison, producing sleep, torpor and death."

Carbonic acid and steam were used in the fire "Annihilator" to extinguish flame. There is a small portion of carbonic acid in the atmosphere —viz: One gallon diffused through two thousand of air. A man exhales about twenty cubic feet of carbonic acid per day, which would vitiate or spoil four thousand cubic feet of air each day, or equal to all that is found over a space of fifty-six square feet to the top of the atmosphere annually. Water has a powerful affinity for this gas, and absorbs large quantities of it. It then acquires new properties, and becomes a solvent of a great number of minerals. It exerts a powerful influence on vegetables at all stages of their development.

FLAX IN CANADA.—The Galt *Reformer* says—"When recently in the township of Waterloo, we were very much gratified to notice that many farmers are entering extensively into the cultivation of flax. In travelling a short distance, we noticed a number of different fields, all of which appeared to be in a very prosperous condition. The fibre of the flax is very fine, and when growing in the fields its appearance is very pleasing. Its flower is a light blue color, which combined with the light green stalk, gives the field more the appearance of a flower garden than of being devoted to agricultural purposes. Some fields sown with millet are also to be seen a short distance from Galt. Our agriculturists are entering upon the higher branches of farming with enterprise and spirit. May they reap that reward which their industry and perseverance deserve."

For the New England Farmer.

THE SEASON, CROPS, &c.

The season, since the first of May, has been all that the farmer could possibly desire, and there never was a better prospect of an abundant harvest of every kind of crop, except fruit, than there is at the present time. The hay crop has been secured in good condition, and is better by one-third at least, both in quality and quantity, than it was last year; the corn in this vicinity never was heavier, while the other grain crops are equally good. If the season continues favorable for the potato, that crop will also be unusually large. Fruit is not "nearly" but a complete failure, as far as my observations have extended. Our farmers have given an unusual amount of their time and attention, this season, to the cultivation of every kind of crop common to the New England States. I think they have profited very much by a hint which you gave them in one of the spring numbers of the *Farmer*, and not only have they planted a few "extra hills" but extra acres, which is conclusive evidence of their willingness to contribute from their farms to the support of the government, although circumstances may prevent a contribution from those veins through which flows the blood of patriot fathers.

I have often wondered why your subscribers and readers in this town did not contribute more to the columns of your valuable paper. You have among your subscribers in this place many intelligent farmers, who are capable of imparting much useful instruction; and to such let me say, you can, (if you will,) do much good to the young farmer by contributing to him through the columns of the *Farmer*, a liberal share of the knowledge which you have acquired by your farming operations in past years. In giving your experience you are not injured, while others may be very much benefited. I always read the communications from our farmers and mechanics, which appear in the columns of the *Farmer* from time to time, with much interest. I have also experienced much pleasure in the perusal of articles from those intelligent females who occasionally contribute to the columns of your paper. Polly, of Enfield centre, has contributed many articles to the columns of the *Farmer* which have been of a very interesting and intelligent order. I hope that now she has assumed the name of Mrs. Mary C. French, and become the wife of a young, industrious and intelligent farmer, her domestic duties will not prevent her giving us an occasional treat from her pen.

Will Mr. Herod Chase please give us his age, so that we can give something of a guess how long he has been getting *rich*; if he has done it all in twelve or fifteen years by his own industry, he has done exceedingly well, but if he has been thirty or forty years in doing it, with a good lift from a father-in-law to begin with, he has not done anything extra, after all.

W. C. A. CLINTON.

Claremont, N. H., Aug., 1861.

REMARKS.—Thank you, sir. You have set those "intelligent people" of your town a good example, which we hope they will follow. Our interests are common, and therefore a free interchange of our

opinions and modes of practice must be useful to most of us. Let the motto be,—"Farmers! write for your paper."

THE SONG OF THE RAIN.

Lo! the long, slender spears, how they quiver and flash,
Where the clouds send their cavalry down;
Rank and file, by the million, the rain lancers dash,
Over mountain, and river, and town;
Thick the battle drops fall,—but they drip not in blood;
The trophy of war is the green, fresh bud;
O, the rain, the plentiful rain!

The pastures lie baked and the furrow is bare;
The wells, they yawn empty and dry;
But a rushing of waters is heard in the air,
And a rainbow leaps out in the sky.
Hark! the heavy drops pelting the sycamore leaves,
How they wash the wide pavement and sweep from the eaves!
O, the rain, the plentiful rain!

See the weaver throws wide his one swinging pane,
The kind drops dance on the floor;
And his wife brings her flower-pots to drink the sweet rain,
On the step by the half open door;
At the time on the skylight, far over his head,
Smiles the poor, crippled lad on his hospital bed;
O, the rain, the plentiful rain!

And away, far from men, where high mountains tower,
The little green mosses rejoice,
And the bud beaded heather nods to the shower,
And the hill torrents lift up their voice;
And the pools in the hollows mimic the flight
Of the rain, as their thousand points dart up in light;
O, the rain, the plentiful rain!

And deep in the fir wood below, near the plain,
A single thrush pipes full and sweet;
How days of clear shining will come after rain,
Waving meadows and thick growing wheat!
So the voice of hope sings in the heart of our fears,
Of the harvest that springs from a great nation's tears;
O, the rain, the plentiful rain.

Dweling in London Spectator.

AGRICULTURAL FAIRS.

The California State Agricultural Society holds its annual fair this year at Sacramento, September 16—21, and offers a long list of prizes, some of which are much higher than for the same grades in the Eastern States.

"Committees are especially instructed not to award a premium to an unworthy object, in any department, though there be no competition. The judges on animals will have regard to the symmetry, early maturing, thorough breeding and characteristics of the breed which they judge. They will make proper allowances for the age, feeding and condition of the animals, especially in the breeding classes, and will not give encouragement to over-fed animals."

Some other good rules are made, such as should be more rigidly adhered to by all societies. For instance:

"The horse of all work should be between fifteen and sixteen hands; quick, lively ears; broad between the eyes; round barrel; short loins; well up in the shoulder; deep chested; square quarters; flat legs, short between knee and pastern, and hock and pastern; hind legs well under him; speed equal to eight miles on the road, and at least three miles at the plow; with sufficient blood to insure spirit and endurance; and no *horse or mare in this or any other class* will be allowed to compete for a premium unless free from any disease or blemish which can be transmitted to posterity.

Exhibitors of implements and machinery will be required to label each implement or machine with the name of exhibitor, name of machine, its use, and price at which sold."

For the New England Farmer.

MORE ABOUT THE THRUSHES.

In the *Farmer* of August 3d is the criticism of a Vermont correspondent upon "J. A. A.," who he says "has something to learn about the thrushes." So thought I, when I read the views of this interesting bird family, which he presented evidently as the views of others, rather than as the fruits of his own observation in the woods, where most of these species of birds dwell, breed and have their homes during the summer. And when I read the communication of the Vermont correspondent, I said that he has something to unlearn and "much more to learn about the thrushes."

Having from the days of early boyhood been a studious observer of birds, and especially of the thrushes, which have ever been great favorites with me, perhaps I may venture to hope that I can do something to set the readers of the *Farmer* right on this interesting subject. Let me premise by saying, however, that I, too, "have something to learn on this subject," for it is not easy to learn everything about anything; but what I have learned of the thrush family of New England, I deem biographically correct as far as it goes, according to my observation.

The Wood thrush, *Turdus melodus*, of Wilson, and *T. mustelinus*, of Gmelin, Latham, Vieillot, Nuttall, Audubon and Bonaparte, and *Merula mustelina*, of Richardson, is stout in form, of a cinnamon brown on the head, becoming rufous on the back, the rump and tail being olivaceous, light below, marked with blackish spots, sharply defined. Its length is about 8 inches, a little more or less in different specimens. My attention was early attracted to this bird of retiring and of somewhat solitary habits, on account of its exceedingly sweet and melodious notes, greatly surpassing those of any other song bird of the field or forest in New England. It has been called by some the American Nightingale, *Philomela luscinia*, of which Milton said,

> "O, nightingale, that on yon bloomy spray
> Warblest at eve, when all the woods are still."

So of the Wood thrush; it sings sweetest at early dawn or at eve, when other song-birds are mute. From some tall tree in the dark deep forest it pours forth its clear, shrill and sweet harmonious notes which have been compared to the double tonguing of a flute. Of a dark, cloudy misty day in the last of May or in June, I have often listened with delight quite as indescribable as are the mellifluous notes of this bird to one who has never heard it sing.

It seems to avoid the haunts and homes of

men, and is shy. It was a long time before I enjoyed the sight of one of these birds though often on the look-out. Wilson, remarking upon the difference in the richness of the notes of the Wood thrushes, says, "I remember one bird, whose notes I could recognize on entering the woods where it dwelt. It usually perched among the topmost boughs of the white oak of a glen, where it poured out its sweet and rich melody, to which I often listened until night-fall, till the fire-flies began to sparkle about me. But alas, in the pathetic language of the poet—

"One morn I missed him on the accustomed hill,
Along the vale and on his favorite tree—
Another came, nor yet beside the rill,
Nor up the glen nor in the wood was he."

I was never more charmed by these songsters than one night preceding the Fourth of July, several summers since, when my friend, Mr. French, allowed me to tarry with him on Mount Holyoke over night, where, in the deep glens and gorges of that mountain range, the Wood thrushes seemed to be at home, both at late eve and early dawn. Mr. Kingsley's exquisite organ-playing in Northampton on the Sunday following that night, was not to be compared with the vocal concert I enjoyed in that retired retreat.

The notes of this song-bird have been rendered as follows: *eh rhehu 'vrhehu*, then varied to *'eh villia villia, eh villia vrhehu*, then *eh velu villiu*, high and shrill, clear, flowing and silvery as a sweet-toned bell. Said the late Dr. Peabody, "of all the voices of summer, there is none so thrilling, particularly when heard as the shadows of night are falling, and amid scenes of deep repose."

It builds its nest a little above the ground upon a shrub or bush, and like the robin, *T. migratorius*, uses mud in the structure thereof. The eggs, four or five, very nearly resemble those of the robin, being of a greenish blue, and free from spots.

The Hermit thrush, *Turdus solitarius*, of Wilson, *T. palassii*, of Cabanis, *T. Swainsonii*, of Audubon, Bonaparte and Brewer, *T. minor*, of Gmelin and Nuttall, *Merula solitaria*, of Swainson and Vieillot, is of light olive brown above and of buff below, marked with spots of olive brown, and is about 7½ inches long. Superficial observers have often pronounced it a variety of the Wood thrush. The habits and appearance of the Hermit thrush somewhat resemble those of the Wood thrush. It lives wholly in the woods. It has a low, musical note, not remarkable for richness or sweetness of quality.

It builds its nest a little above the ground, on the branch of a tree or shrub, and lays four or five eggs of a greenish blue, marked toward the large end with specks and blotches of olive.

Wilson's thrush or Veery, *Turdus Wilsonii*, of Bonaparte and Nuttall, *T. minor*, of Gmelin, *T. mustelinus*, of Wilson, *T. fuscescens*, of Stephens and Gray, and *Merula minor*, of Swainson, is of a reddish-brown on the head and neck, beneath whitish, marked with spots of lightish brown. Length about 7½ inches. This species is known from the others by the indistinctness of the spots beneath; and like the preceding species it is fond of solitude. It is frequently seen along the borders of woods, and brooks covered with shrubs, also in bush pastures of old fields. It is most musical at early dawn and after sundown. Its notes are soft and silvery, and exceedingly pleasant to the ear of one of a pensive turn of mind. They come very far short, however, of the richness of the melodious notes of the Wood thrush. The notes of Wilson's thrush have been written as follows: *'vehu, 'v'rehu, 'v'rehu;* sometimes *vea vea, 'vrehu 'vreha, vehu*, running up till they become shrill and quick at the close in the first phrase, but from high to low, and terminating slender and slow in the latter; another variation seems to be *'ve vea, vehurr*, ascending like a whistle. The song of another has been expressed by the following phrases; *'ve 'villill 'tullull 'tullul;* repeated with variations; *ve villilil villill, villill;* then, *villilill villilill, tullilill tullilill*, the whole delivered in a silvery, shrill, hollow sound, being very agreeable to ears attuned to Nature's harmony. Occasionally he utters a note represented by the words, *queah, queah*, and at other times *y'eow, y'eow*, may be heard.

This species builds a nest in a low shrub or bush, and the female lays four or five eggs of a greenish blue, without spots, resembling the eggs of a cat-bird. A pair commonly raises two broods in a season.

The Olive-backed thrush, *Turdus solitarius*, of Wilson, *T. olivaceus*, of Giraud, *T. Minor*, of Gmelin and Vieillot, and *T. Swainsonii*, of Cabanis, is distinguished from the foregoing species by the uniform dull olivaceous shade of its upper parts, its throat and breast being more reddish than the others which have been named. Its length is about 7 inches. This species is quite common, but as it possesses no extraordinary qualities nothing further need be said here of its general appearance or song.

Besides the species named there are the Golden-crowned thrush or oven-bird, the Ferruginous thrush or brown thrasher, *Turdus rufus*, the American robin, *T. migratorius* and the Cat-bird, *T. felivox*. These have all, however, been removed from the genus *Turdus*, except the robin, by later ornithologists.

I have thus attempted briefly to present some views which observation and acquaintance with these birds, their habits and songs, have furnished me. I do not claim to have learned out on this subject, but trust that in the main the views here presented will be found to correspond with Nature. If the translator has failed to give a literal rendering of this section of the great volume of Natural History, let the errors be pointed out and the emendations furnished for the benefit of the readers of the *Farmer*.

ADOLPHUS.

VERMONT STATE FAIR.

The Eleventh Annual Exhibition of the *Vermont State Agricultural Society* will be held at Rutland, on Tuesday, Wednesday, Thursday and Friday, September 10, 11, 12 and 13, 1861. We think our friends in Massachusetts and New Hampshire may make a profitable and pleasant visit to Rutland on this occasion. They will find the Vermonters intelligent in their business and hospitable at their homes. Those who have not visited that section of New England will find a look at the scenery, farms, &c., quite as agreeable

as the exhibition itself. We hope a large representation will be present from both these States, and that our good friends of the Green Mountain State will make their show strictly an *agricultural* one, embracing, and giving strict attention to every other department of the farm, as well as that of horses, in which they excel so much.

The officers of the Society for the present year are:—*President*, H. Henry Baxter, Rutland; *Vice Presidents*, Edwin Hammond, of Middlebury, J. W. Colburn, of Springfield, Henry Keyes, of Newbury, John Jackson, of Brandon; *Recording Secretary*, Charles Cummings, of Brattleboro'; *Corresponding Secretary*, Daniel Needham, of Hartford; *Treasurer*, J. W. Colburn, of Springfield; *Additional Directors*, Frederick Holbrook, of Brattleboro', H. S. Morse, of Shelburne, D. R. Potter, of St. Albans, Henry G. Root, of Bennington, E. D. Bush, of Shoreham, David Hill, of Bridport, John Gregory, of Northfield, Elijah Cleveland, of Coventry, Nathan Cushing, of Woodstock, L. B. Platt, of Colchester, George Campbell, of Westminster; *General Superintendent*, Henry S. Morse.

EARLY LETTUCE AND ONIONS.

Competition is as much an element of success in agriculture as in any other employment. A newspaper which should aim merely at chronicling the news of the day, without exhibiting any enterprise or tact in securing the freshest intelligence, and being among the first on sale, would meet with moderate success. None the less true is it of the husbandman—who raises his produce for the market—a day's difference in the time of sale may make a difference of one half in the prices received. "First in the market," then, should be the motto of every farmer. By sowing the seed in the fall, lettuce and onions can be had much earlier in the season than from spring planting. About the first of August a good spot of ground should be chosen, and, after being well prepared, sown thick with seed. In the beginning of September another bed of the same description can be made. They should be kept free of weeds, thinned out to some extent, and when cold weather comes, covered with a thick layer of manure or litter of some description. When the usual time for spring gardening arrives, these plants will be found to have an advanced growth of several weeks, and will be ready by March or April for the market or home consumption.—*Exchange.*

An Extraordinary Hawk.—Mr. W. Jardine, draper of this town, has been for some time in possession of a hawk. A few months ago, she laid two eggs, soon after which she sat upon them; her own eggs, however, were subsequently removed, and two guinea fowl's eggs placed in the nest. The hawk sat upon them the usual time, when to the surprise of all, two fine chickens were hatched, with which their step-mother appeared highly delighted, and over which she continued to watch with all the tenderness of a natural parent; the only thing at which she appeared uneasy, and evidently showed surprise, was the fact of her young "picking up" the moment they were hatched, and many were the efforts she made to induce them to offer their bills, that she might cram in pieces of raw meat. We consider this circumstance well worth the attention of the naturalist.—*Dunstable Eng. Chronicle.*

For the New England Farmer.

THE ARMY WORM.

I noticed a few days since, for the first time, the appearance of the army worm in Danvers, in a piece of barley belonging to Mr. Benjamin F. Porter, of Danversport. They were first seen in great numbers through the entire field of several acres climbing up the stalks of the barley, eating the blades and cutting off the heads of the grain. The day after these worms were discovered the barley was mowed in order to preserve it when they dropped to the ground, throwing themselves into a coil, a habit of the insect when disturbed. Many of them soon commenced a march for the neighboring fields and gardens, while others blindly pushed forward a column towards the highway over a stone wall, where they were crushed by travelers on the road. But the main body marched to the adjoining gardens and enclosures, where the proprietors were waiting to receive them in their entrenchments, which had been thrown up a foot wide and two feet deep. The worms, as they fell in their advance into the trenches, were assailed in various ways by eager combatants, some spreading over them lime, tar or ashes, while others resorted vigorously to pounding them. In this way countless numbers of them were destroyed. The rear guard of the army of worms, composed principally of those of smaller growth, [young recruits probably,] kept in the field where they were picked up by a troop of fifty young red winged black-birds; and I am pleased to record the fact of these birds feeding upon the army worm, as it furnishes us with a new argument in favor of the protection of our birds. I also noticed the robin feeding upon these vermin. As these birds are considered by many very mischievous, let us remember before we destroy them, that they are our faithful allies in our war against the army worm, perfect Zouaves, show no quarter, and quietly and effectually dispose of their captives in a way man cannot. I noticed this morning that the few remaining worms were working their way into the ground, probably to pass into the chrysalis state. But of this I know nothing, as the habits of the army worm are unknown to me as well as to my neighbors, and my books as yet afford me no information. It is very desirable that the new edition of Dr. Harris's "Insects of Massachusetts Injurious to Vegetation" should contain a full account of the habits of this destructive insect before it passes through the press, and that the *New England Farmer* should be furnished with such facts in relation to it as would be useful to its numerous readers.

Since the above was written, I have visited the field infested with the army worm, and find by digging a few inches into the soil, the worms are

rapidly passing into the chrysalis state, which will enable me shortly to furnish the editor of the *N. E. Farmer* with the insect in its several transformations, if he desires it. S. P. Fowler.

Danvers Port, Aug. 7, 1861.

Remarks.—We are obliged to our faithful correspondent for this letter, and for the promise to furnish us with further information on this important subject. We should have been glad to publish it last week, but when received our paper was so far made up that we could not find a place for it.

TO KEEP GRAPES FRESH.

The following is a French method. Glass bottles are placed upon simple wooden racks about the outside of the fruit-room.

"Cut the bunch of grapes on the trellis at the end of the month of October, or even later, if it be possible. Let it be attached to a piece of the branch, including three or four joints below the bunch and two above. Put a little grafting wax on the upper end of this branch, and introduce the lower end into a vial filled with water. The mouth of the vial may be kept open and the water unchanged; add four grains of powdered charcoal to each vial. This addition keeps it pure during a whole year. It is not necessary to fill up the vials, the evaporation not lowering the level of the water more than two or three fractions of an inch in the space of six months. When the bunches of grapes are arranged as mentioned, we have nothing more to do, than, from time to time, to cut away the berries that are rotten. It is essential that the temperature of the fruit-room should not descend below zero."

The editor of the *American Farmer* says that this plan of preserving the grape may be very successfully practiced with other fruits ripening in autumn, though not with a probability of preserving them fresh quite so long as the grape. He has seen fruit of the Algiers winter peach kept fresh in a vial full of water, but unsealed, for a long time. The peaches, together with the leaves, were not detached from the twig. This is worthy of trial, and the time to put it in execution will soon be at hand.

A CURE FOR GLANDERS.

As it may be of service to some people, I give you an account of a cure I made of glanders a few years back. My horse was a valuable one, and had had the glanders some 12 or 18 months, and so badly did he have it, that I offered to sell him for $15. He could be heard to breathe from fifty to one hundred yards every breath; indeed, we could not sleep well, so distressing was his breathing, the stable being close by. I determined to kill or cure, so for experiment: On Monday, I gave him as much dry calomel as would lay on a ten cent piece; on Wednesday, I did the same; on Friday, I gave it again; on Saturday, he could not bite a pumpkin; on Sunday morning, I looked in his trough, and found at least one quart of old mattery scales, with a mixture of matter, all in a lump. From that time he breathed easy, and never was troubled again with the glanders; it was a perfect cure. I worked him in my buggy for two years after, and traded him as a sound horse, to a neighbor who was familiar with his disease all the time he had it. He was slightly salivated—was as good as before. A neighbor tried the remedy with equal success.—*Correspondent Cotton Planter.*

EXTRACTS AND REPLIES.

CALIFORNIA BEER SEED—INSECTS ON WHEAT.

You have doubtless, in common with most of your readers, heard of or seen the substance known as "California Beer Seed," or "Boston Yeast." A very extensive ignorance prevails in this region as to *what* this useful substitute for yeast really is, and I wish to address a few inquiries to you in respect to it, hoping that many may be enlightened through the columns of your valuable journal. Is it known where the plant, (if it is one,) originated, or where it was discovered? Admitting it to be a vegetable, are the conditions of its growth and perfection understood? It is said by some not to be as healthful as ordinary yeast: are you aware that this is true or otherwise?

If, sir, you or any of your many readers can answer these inquiries, or give any information on a subject on which, at present, very little is known, you will greatly relieve the mind of a

Perplexed Housekeeper.

P. S.—Is the reddish brown insect preying on the wheat in this region the true "weevil?" I am desired to inquire your opinion as to the best method of treating the crop after the insect gets into it. Many farmers here have mowed down the grain, hoping to save the berry from the maggot, but the prospect is that very little, if anything, can be obtained in that way.

Worcester, August 1, 1861.

Remarks.—We know nothing of the "California Beer Seed." An article in another column gives some information with regard to insects on wheat.

MOWING MACHINES.

I rather think, from remarks that I have heard from A, B and C, about the use of mowers in the cutting of grass, that the popular opinion is with you. From what I have seen of the use of these implements, for ten years last past, I am of the opinion, when properly constructed and properly guided, that full one-half the expense of cutting grass can be saved by them. I am not particular as to what machine shall be preferred, though I have seen no one that did the work any better than the Buckeye. The proprietor of this machine I do not know. J. W. P.

South Danvers, Aug. 5, 1861.

EXPERIMENTS WITH MUCK.

I have read a great deal about experiments with muck, and now I will give those I have made. In the fall of 1859 I spread 60 loads on two acres of upland grass ground, which had so run out that it bore nothing worth harvesting; now it gives 1½ ton per acre. The muck which I used was taken out of a hollow where leaves of the woodland above, and decayed wood, &c., had

been collecting for ages, which I think makes the best of muck. I also tried the same muck on a subsoil of clay, for potatoes. I plowed the ground and harrowed; on one part of the field I used fine horse manure in the hill, on the other part I used muck, and the potatoes were much more numerous, larger and better for the table than those where I used horse manure. I think there is great difference in muck. That which is composed of decayed vegetation, in low places, in woodland, is far preferable to that taken out of swamps. C. H. Rood.

West Windsor, Vt., 1861.

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MOWERS—CORRECTION.

I find two mistakes in the last *Farmer* in the report I sent you of the mowing trial at Vernon, viz:

The Pony should be 162 pounds draft, instead of 225, as you have it; you have omitted the two-horse 4 feet cut, draft 225 pounds, of Woods.

Charles T. Parsons.

Northampton, August 5, 1861.

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IRON GRIST-MILLS.

In the *Farmer* of March 5, 1859, you insert a plate of an iron grist-mill. Can you give me any information in regard to the success of the mill, durability, cost, &c.? I wish to purchase a mill to be propelled by water power.

Sutton, July, 1861. B. L. Batcheller.

Remarks.—We have no information on this matter that would be valuable to you.

STRAWBERRY CULTURE.

The last week in August is a good time to transplant strawberry plants. A small piece of land, and a little labor bestowed upon it by the women—if the men cannot attend to it—once or twice a week, will give a family of six or eight persons a liberal supply of this delicious and wholesome fruit. None need be without them who have a square rod of spare land, as the plants are hardy, and only need to be kept free from weeds, and supplied with plenty of water. There is no necessity that the land shall be made very rich. Soil that will produce good corn will bring good strawberries. Everybody has soap suds, and most persons in the country have wood ashes. Let the suds be applied freely in the early part of the season, say until the fruit has fairly set, and then continue with water that has been standing through the day in the sun. Once a week scatter a little ashes between the rows and rake it in, and if Heaven sends sunshine and warmth, a plentiful crop will be the result.

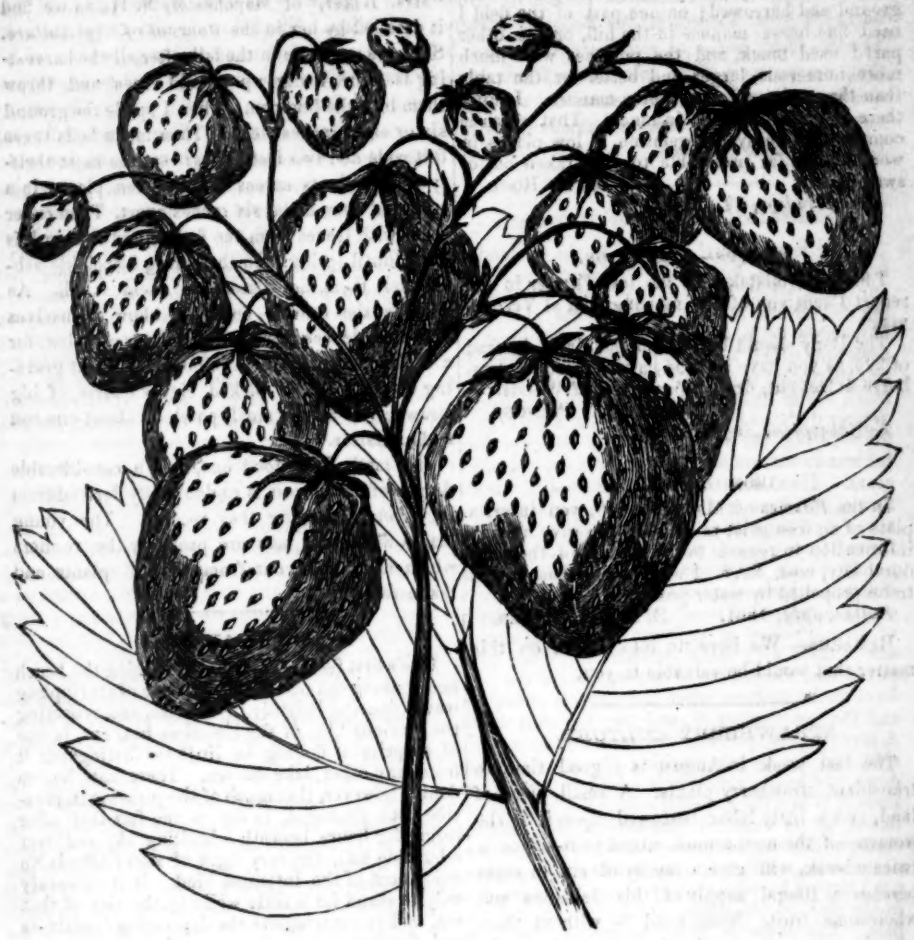
There is no secret about raising strawberries. Some persons are deterred from cultivating them because they think some peculiar process must be observed; but there is no need of this. The process is as simple as that of planting potatoes, as they will grow, and do well, under any fair treatment, where they can have plenty of moisture. But to be definite we give the process of "Mrs. Baker," of Manchester, N. H., as we find it detailed by her in the *Journal of Agriculture*. She says:—"Late in the fall, after all the harvesting is done, I dig up my old vines and throw them into the hog pen. Then I spade the ground six or eight inches deep. Then make beds three feet wide and two feet alleys: set the most thrifty young plants across the bed, ten plants in a row, and rows about six inches apart. Then cover them with leaves from the forest, and the work is done, until spring. In the spring I sprinkle ashes over them, not disturbing them at all. As soon as the crowns begin to show themselves above the leaves, I water them every morning, for a while. Then again in bloom. Then at graining of the fruit. I picked eighty quarts of big strawberries from a small patch of about one rod and a quarter."

Her method is good one, and a considerable degree of her success is undoubtedly derived from the liberal watering they receive. The young plants which she sets are probably the runners which have gone out from the old plants and taken root.

THE DEAD SEA.

One's first feeling, indeed, on gaining the beach and looking out on the vast expanse of its rippling waves dancing brightly in the sun, and reflecting the glorious blue of the cloudless heavens, is one of surprise at finding so little to distinguish it from any other lake or sea. There can be no doubt, however, that much of the pleasing impression thus produced, is due to the fact that after riding for hours beneath a broiling sky and over a burning soil, the very sight of water affords an enjoyment of the intensest kind. It is necessary only to stand for a little while by the side of that sea, and to contemplate the depressing loneliness and desolation that reign around, in order to realize the character that truly belongs to it. Not one solitary skiff sails that sea—not one solitary fish swims in its waters—not one solitary habitation, far as the eye or telescope can range, can be descried within sight of its shores—no sustenance for either beast or man, neither grass nor grain, does the sterile region by which it is encircled, yield; and yet this is the very region that was once the paradise of the land. Truly, "Sodom and Gomorrah and the cities about them are set forth for an example, suffering the vengeance of eternal fire." And yet sterile and dreary as is even the northern end of the lake, the aspect of the country around the southern shore is more repulsive still. It is, therefore, literally "all the plain," from the one extremity to the other, which God has overthrown.

Improvement in Stock.—It is stated that in 1839 the average weight of horned beasts from Ireland, sold in the London market, was 640 pounds; the present year the average is 736 pounds each.



THE BUNCE STRAWBERRY.

MR. EDITOR:—According to your desire, we send you a slight history and description of the Bunce Strawberry, together with a cut, which is a correct representation of a cluster of the berries in size and form, as they grow with ordinary cultivation.

The plants were first brought to this country from the East Indies by the late Capt. Hooper, of Marblehead, and by the way of friends, we received a few plants for trial, and if thought worthy, for dissemination.

It is a very vigorous grower, often having ten or twelve and sometimes more fruit stalks on a plant. The stalks are high and strong, keeping the berries from the ground, and with the heavy foliage breaking the force of the rains, render it unnecessary to mulch them to keep the berries clean. The foliage is sufficient protection in winter; the plants doing better without, than with anything additional.

The berries are not very dark colored, but bright and lively. Seeds small and sunk deep. Flesh white, fine and firm, with excellent flavor and very sweet; parts from the hull easily. Continues long in bearing, the latest berries filling perfectly, and growing to a good size. Flowers perfect. This summer we picked eight hundred boxes of berries from a bed containing thirty square rods of ground, set last year in June.

Yours truly, BUNCE & Co.

REMARKS.—We visited the piece of ground upon which these gentlemen say they "*picked eight hundred boxes of berries* from a bed containing *thirty square rods* of ground." We did not measure the land, but should judge that they had done so correctly. It is a strong, granite soil, moist, and considerably shaded by young

apple trees, perhaps six or eight years old. At this rate, they got more than 4000 boxes to the acre, which, if we remember correctly, rather beats the great success of our Belmont friends. The two finest boxes of strawberries we saw in their season were from this bed. There is so close a resemblance between them and the "Cutter Seedling" that we are not sufficiently skillful to tell one from the other.

PRESSING HAY FOR MARKET.

There is an annual increase in the demand for hay, straw, &c., for use on shipboard, and also in our cities, where dry fodder is every year becoming scarcer and higher, owing to the absorption of meadow fields as pasturage grounds for milch cows and other animals. The new facilities for transportation constantly being opened, render it much easier than formerly to bring in from a greater distance hay, straw, &c., and a good Press for reducing the substances to a compact form for transportation has come to be a great desideratum. These have been constructed of various forms, but, have generally been objectionable on account of their great bulk, difficulty of being removed from place to place, and the clumsy manner in which they are worked. Most of these difficulties have been obviated, however, in a recently improved Press. We have seen several of these Presses of different sizes, and worked one of them with much satisfaction. When to be put in use, the pulling of a cord lowers the platform to the bottom, when the front is closed up, and the hay pitched in, and the top shut down. A lever is then put into the iron socket on each side, and by simply working the lever up and down, the lower platform is raised up with great force. When the material within the press is reduced to its smallest dimensions, the binding cords, which may be ropes, wooden withes, or annealed wire, (which is now coming into general use,) having been previously placed in the grooves in the side of the press, are bound around the bale. The cover is then thrown up, the front turned down, and the bale rolled down. The compactness of the machine, the ease of transportation, the simplicity and continuous working of the levers, and the great power obtained, renders this machine worthy of attention. The same form of press is well adapted to pressing cotton and other substances. Cannot farmers contrive to press straw into bales, and send it to us at a cheaper rate than we can now get it for—six cents for a "bundle" no larger than one's arm? These presses are of various sizes, and cost $50 to $125. —*Exchange.*

SAVE YOUR BOOTS.—The fishermen, in some parts of the country, preserve their boots waterproof by the following composition: One pint of boiled linseed oil, half a pound of mutton suet, six ounces of pure beeswax, and four ounces of resin. These ingredients are melted together over a slow fire, and the boots, when new and quite clean, are warmed and rubbed with the composition, till the leather is completely saturated. —*Scientific Artisan.*

CULTIVATION OF WINTER BARLEY.

We have before us fine specimens of *winter barley*, raised by Jacob B. Farmer, Esq., of Concord, Mass. The following account of the mode of culture we find in an exchange paper. If Mr. Farmer thinks this is not the true mode, we shall be obliged to him to give the public his method through these columns. This barley is for sale by Nourse & Co., 34 Merchants' Row, Boston.

The soil most suitable for barley, is a good strong loam. If not naturally rich enough, it should of course be manured sufficiently to make it so. It should be well drained; for land inclining to be wet, and not sufficiently drained, will not pay to grow barley. There are, no doubt, a great many manures that will answer the purpose. Stable manure does very well; so does one or two good green crops plowed under, such as red clover, rye, &c. Of course they should be well rotted before the grain is sown. Oat stubble is perhaps preferable to most other ground for putting in fall barley, for various reasons, some of which will be explained in their proper place.

It is a very important matter that the ground should be thoroughly broken up and well prepared by the last of August, in order that the barley may be sown as early as possible in September, if seasonable, and if not seasonable, it should be put in the first suitable weather, as a general rule, (lat. 38°,) we cannot sow too early in September; but when we have a very hot, dry season, it would be better to wait until about the first of October, when the sun has not so much power. It would be advisable to sow then without waiting longer, even if the ground is rather dry. The sun will not be likely to hurt it after that time.

There is quite a difference of opinion in regard to the amount of seed sown to the acre. Two bushels, perhaps, is as near right as we can come at it; and in this item we should be governed by the time it is sown. For instance, one and three-fourth bushels, or even one and a half bushels, sown early in September, will be equal to perhaps two and a half sown in November, for the very plain and palpable reason, that when sown early it has a chance to stool or spread out over the ground, but when sown late, it has such a precarious existence that it has no chance to spread before a great deal of it is thrown out by the frost, and perishes. After sowing, the grain should be harrowed, cross harrowed and rolled, the old furrows opened, or others made wherever it may be thought necessary, for it will not do for water to stand on it.

Barley has its casualties to encounter, as well as wheat and other grain. If sown before the first of September, there will be danger of its coming to a joint before the hard weather of winter comes on, and it may by ruined; but sown about the first of September, there is not much danger in that particular. It is true the insects, &c., may injure it more or less, yet all the injuries it is likely to sustain from those causes are not to be compared to the injuries received by the late sowing, from severe weather and other casualties.

The reasons why oat stubble is preferable, are that it is easier broken up, and we can make a

far better job of it than we could with wheat stubble, or other ground that had lain twelve months without being plowed. But the most important advantage of all is that when the barley is put in about the first of September, all the scattering grains of oats that are in the ground start and grow up with the barley, thereby helping to cover the surface of the whole field before the hard weather sets in; and when that does occur, the depth, &c., you may sow all your seeds at improper depth, while if you, under the same circumstances, sow broadcast, some of your seed will be pretty sure to be right.

THE SEASON AND CROPS.

Since we last spoke of the season and the condition of the crops, some four weeks since, we have had rain at different times,—first, in slight and gentle showers, and then in a drenching, easterly storm, which saturated the earth, filled the springs, and is now making the streams run merrily again. Whether this rain is to save the *potato crop* is uncertain. In all this region the vines of many of those early planted had been seriously checked by the sharp drought, and were more or less wilted, while some had altogether ceased to grow. The later planted crops still retain green and growing vines, and the plentiful rain may yet help them to mature a good yield. We hope this may be so, as, if "bread is the staff of life," the potato has become almost as indispensable to our people. In favorable seasons, it is cheaply raised, is wholesome, may be cooked in various forms, and even the sick can partake of it when most other kinds of food would be rejected.

These latter rains will not only aid the second *hay crop*, which is now being cut in warm and rich spots, and in later localities will be quite abundant, but they will essentially promote and sustain the fall feed, and keep up the supply of milk until late in the season.

The drought rather seriously affected the *Spring and Winter grains*, so that this crop will be depreciated to one-third less than that of last year, in this State. We hope our correspondents in New Hampshire and Vermont will inform us of the state of these crops in those States.

The *Indian corn* crop now appears very promising—the wind in the late storm blew it over somewhat, but it is righting up again under the warm suns that have followed. With two or three weeks more of hot weather, and the absence of early frosts, there will be a magnificent harvest of this prime crop,—the glory of our New England harvests.

The *fruit* crop will *not* be an entire failure. Many orchards have a few scattering *apples*—very few, we confess. During recent rambles, however, we have seen many trees with good crops on them; in one small orchard, nearly every tree was full, and the fruit appeared well. There are a few quite ordinary *peaches* in Boston market,—but scarcely one to each individual of the population. Notwithstanding the sweeping destruction of this delicious fruit, we hope all who have suitable places will plant a few healthy trees, as we shall undoubtedly have peach seasons again, as favorable as those which are passed.

On vines that were laid upon the ground and protected, there are now some fine *grapes*, from which we may gather fruit if frosts do not overtake them.

Cranberries are quite abundant in the meadows. On one or two pieces we find the cranberry worm destroying the berries, and on lands that cannot be flowed there seems to be no way of interrupting its progress. We are not certain whether the *egg* from which the worm proceeds was deposited in the blossom or upon the berry itself. Those infested begin to turn red quite early, and upon opening them are found nearly hollow, the flesh or pulp of the berry having been eaten, and the skin left fair and whole with the exception of one small puncture, made for the deposit of the egg, or for an air hole.

We have two or three square rods growing on high land, the vines of which are filled with splendid berries, and they are considerably earlier than those we have recently looked at in the meadows. The worms are among them, however, and may yet destroy the crop. The promise now is, that there will be a bushel to the rod—not a large crop, but a fair one for a three years' plantation. The worms leave the berries about the 15th of August, but what form they assume then, or where they go, we are not certain; we suppose, however, that they do not enter another berry, but enter the ground, and emerge sooner or later in a winged form.

The *root crops* that came up well, are now growing finely, and will be so sustained by the late rains as to give an average product.

Finally, as a whole, the harvest already secured, including the hay crop, has been more than an average one in all this region. At the West, we learn that the wheat crop was heavy, and has been favorably secured. We must wait in hope for the great Indian corn crop, and the indispensable potato. While our beloved country is distracted by a destructive war, diverting labor from its accustomed channels, and at the same time demanding an extraordinary amount of food, the season has been propitious, so that the farmer has been able to reproduce the prime necessities of life in profusive abundance. Let us, then—while we cherish no hatreds, and seek no revenges against our erring brethren—fight for liberty and union as long as our hearts have motion, or our arms power, and prove to the world that a

government based on the immutable principles of Justice and Equality cannot be overturned by wicked and designing men, either at home or abroad.

For the New England Farmer.

THE MILK BUSINESS.

Since the commencement of the railroad era in this country, the traffic in milk has become a business of great importance. The inhabitants of cities and large towns are supplied with new, sweet milk—brought to their doors—for a price so low that very few are obliged to do without this nutritious article of food. Farmers who live within forty or fifty miles of a city, and near the line of a railroad leading to it, are giving particular attention to the production of milk for the market; and as a general thing, they find it more profitable than any other branch of farming. By selling milk the labor of the farmer's wife is very much lightened, which is a fact of no small importance among our delicate American women.

But there is one discouraging feature in the milk business which ought speedily to be removed. I refer to the length of time which many farmers have to wait before receiving pay for their milk. Very frequently they have to wait from two to six months, and sometimes a year or more, to have their bills cashed. To those farmers whose income is but small, these long credits are sometimes really distressing. I would like to ask the milkmen if there is any real necessity for this tardiness in settling accounts? If such delay is unavoidable, then we farmers must "grin and bear it;" but it seems to me, and many others, that there is no need whatever that credit should be given for a longer time than one month.

The consumers of milk buy it in small quantities from day to day, and the indebtedness of each one at the end of a week or month is small. If this small sum was promptly collected from each individual every month, the producers of milk could have their dues; but I fear that the milkmen are often negligent in collecting these small bills, and that after they are collected, much time is allowed to slip away before the amount is paid over to those to whom it mostly belongs. Is it not so, brother farmers? And cannot something be done to remove this great nuisance and wrong? Farmers are usually very quiet men, and do not like to "make a fuss," but in a case of this kind, if they would *all* say the word, and pull together, the change would come often and regularly into their pockets. It is not enough that farmers are obliged to wait so long for their pay, but recently, on some roads, milk trains are run on the Sabbath, and the milk must be carried to the depot Sunday morning. If the farmer refuses to do this, none of his milk will be taken. I would like to inquire of any one who knows, if it is lawful to run a railroad train on the Sabbath day? If it is not, why are the railroad companies allowed to do so? The whim of a few milkmen has brought into action this new method of desecrating the sacred day of rest; for there is no greater necessity for the running of milk trains on the Sabbath at the present time, than there has been in past years, or than there would be in carrying to market, on Sunday morning, all kinds of green garden sauce, or any other eatables which are better when fresh from the farm. There are some men engaged in the milk business who think it wrong to team milk on Sunday, but who dare not refuse to do so, because they are afraid of losing a profitable business! What sort of a conscience can a man have who pursues this course of action?

S. L. White.

South Groton, Aug. 10, 1861.

Remarks.—The milk business of Massachusetts has come to be an important interest—too important to be conducted in the loose, and illegal manner which prevails. Our friends will bear us testimony that we worked hard to introduce a better state of things several years ago, but only succeeded in introducing a partial reform. It is high time that the whole business should be conducted legally and fairly for the farmer.

For the New England Farmer.

RETROSPECTIVE NOTES.

The Bark Louse.—At page 356 of the August number of this journal, we have a quotation from the *Canadian Agriculturist* in reference to this insidious and destructive little parasite. I call it an *insidious* as well as a destructive insect, for in size it is so small, and in color it is so similar to the bark of the trees which it attacks, (chiefly the apple and the pear,) that it may quite readily escape notice, and has, indeed, in a few instances which have come to my knowledge, actually escaped detection even on trees infested by it so abundantly that a pin could scarcely be struck into the bark of the trunk of the tree anywhere without transfixing one of these parasitic enemies. These statements about the difficulty of detecting bark lice on apple-trees on account of their small size, and their brown, bark-like color, and about their abundance on some trees, may seem astonishing and almost incredible to persons who have never had an opportunity of observing or studying them, but those who have had opportunities of this kind *know* that their size and color help to conceal them from *superficial* observation, and that sometimes they are so numerous as to cover the bark *completely*. It is on account of the *insidiousness* of the attacks of this enemy of our fruit trees, as well as on account of the amount of mischief often done by it, when it happens to go undetected or unsubdued for several seasons perhaps, that it is of importance to solicit the attention of farmers—the young and inexperienced especially—to the means of detecting and extirpating this little, but not insignificant enemy.

As to the *importance* of soliciting, and, still more, of giving attention to this subject, the reader may be helped, as the writer was also some years ago, in forming some adequate conceptions, by reading and *pondering* the following sentence from "The Farmer's and Planter's Encyclopedia." Under the heading of Bark Lice it is said:—"The mischiefs effected through these minute insects, to fruit and other valuable trees, are *far greater than is generally supposed*, and hence every farmer and gardener must be inter-

ested in becoming intimately acquainted with the nature and habits of so formidable an enemy."

There are two appearances which should always direct attention to the condition of fruit trees, and which may lead to the detection of bark-lice, if present. These are, firstly, a general unhealthy, unthrifty appearance; and, secondly, a rough and peculiar state of the bark, as if it were covered all over with small scales or shells. If these minute scales or shells be examined closely, they will be found, if bark-lice, to adhere so closely to the bark as to be hard to separate them therefrom, (though the prick of a pin will start them at some seasons of the year,) and also to yield when crushed a dark colored fluid. In the month of June, we have found, on carefully raising the edge of these scales, several very small white specks which we supposed to be eggs, the parent insect being, apparently, dead and dried up, and serving merely as a scale or dry skin for protection to her future progeny.

As to the *cause* of the unthrifty appearance of trees infested by these insects, we have had two or more guesses or theoretical opinions, namely, either that the insect, by its pricking the bark and sucking up the sap or juices of the tree in so many places, produced this unthriftiness, or that as in the case of ill-fed and uncared for calves and other animals, the cause of the unthriftiness consisted in the unfitness and unfertility of the soil, depriving the tree of proper nourishment, or in a neglect to preserve the bark or skin of the tree in a healthy condition. One of these theories has been considered as possessing not a little probability, inasmuch as most of the trees which we have seen or heard of in neighboring orchards, as infested with lice, have been growing, or attempting to grow, on a hard, clayey, wet soil. This unfavorable condition of the soil would just as certainly produce unthriftiness in a tree, as want of sufficient or of nutritious food would produce a similar unthriftiness in a calf, and it seems to be only upon such half-starved unfortunates, whether of the vegetable or animal kingdom, that lice make their attacks, or find a place of abode appropriate to their parasitic tastes and wants. Another of our theories or guesses as to the cause of the unthriftiness of trees infested by bark-lice—that, namely, which supposes it to consist in an unhealthy state of the skin or bark, the lice being *more the consequence* than *the cause*,—has seemed to receive some support from the fact, that, so far as our observation and inquiries have extended, lice have *never* been found upon trees which had been regularly, once or oftener every year from their youth up, scrubbed with soap suds, lye, or any similar application.

But we are wandering too widely from the main object we had in view when we took pen in hand. This was to say an encouraging word to such farmers as may find lice upon their trees. The writer quoted from in the article under notice, speaks *so discouragingly* that some might be led to consider all efforts to exterminate this insect as likely to be in vain, and thus to give up to destruction, in a mood compounded of laziness and hopelessness, a tree or trees which a little judicious effort might save, and make productive. Let no one be discouraged by the want of success related in the article referred to (page 356, current volume.) The soil of that orchard may need draining, or the washes used may have been too weak. All the trials made by neighbors, at our suggestion, have been uniformly successful; while in our own orchard we have had no lice, owing, probably, to a good scrubbing twice a year, with lye and soap-suds acting as a *preventive*. But when not *prevented*, lice can *certainly* be killed or *cured*, by equal parts of soap-suds and strong lye, preceded by some judicious scraping of the bark. June is perhaps the best month.

MORE ANON.

HARVESTING ROOTS.

Some persons say that "potatoes should be taken from the ground as soon as they are ripe. That it is bad policy to allow them to remain in the hills till the tops become entirely dry, as is the practice with some farmers. That potatoes managed in this way are almost always inferior to those harvested at maturity, and are not unfrequently watery and unfit for use."

These notions do not commend themselves to our views of the matter. It seems to us that no place can be found so completely adapted to the preservation of all the good qualities of the potato, until severe frosts come, as the cool moist soil where it grew. It comes to maturity there, the vines die, so that all action ceases between tuber and stem, the potatoes are not crowded or losing their moisture by evaporation, and are in the precise condition to be kept in their greatest perfection.

Some persons leave potatoes upon the ground, exposed to a hot sun during the day in which they are dug; thus those that are turned out in the morning lay in the sun during an entire day. We cannot think this practice a good one. If the potatoes are moist, and a considerable quantity of soil adheres to them, it is very much better to put them in the bin as they are, for it is quite impossible to thoroughly dry them without injuring their eating qualities, as there is a principle in them, which exposure to the sun concentrates, and converts into an actual poison. The small tubers which sometimes grow near the surface, and which, by the washing of rains or other causes, are left bare, assume a greenish hue, and, when boiled, possess a disagreeable, copperish taste. The same result is produced, in less degree, by exposure to the sun and air after digging. It is a common practice in some places to deposit the potatoes in boxes or barrels, and protect them from the sun and air, by a covering of sand or loam. This retains them moist, and effectually secures the preservation of all their excellences.

Turnips may remain in the field till late, as they are not so much injured by frost as is generally supposed. When "caught out" by frost, the turnip, if allowed to remain in the ground

till it thaws, will not be essentially injured, either in its eating or keeping qualities; the soil abstracts the frost and leaves the texture of the vegetable fibre nearly unimpaired. It is of importance to give the roots a cool place, where they can be occasionally ventilated during the winter, as in warm positions they are liable to become "corky," and are much injured as to their nutrimental properties; besides, when stowed in large and compact masses, they will heat and most likely spoil. When ruta bagas are raised in large quantities, they require much room. If piled up, like cord wood, into stacks, the air will pass through the heaps much better than if thrown into one large mass. Barn cellars in which the temperature can be retained a little above the freezing point, will be found sufficiently warm for this purpose.

POISONOUS PROPERTIES OF BRINE.

It may not be known to all that brine, in which meat or fish have been salted, is poisonous to domestic animals. If left in their way they will partake freely of it as they will of pure salt, when it very often proves fatal. The *L' Union Medicale*, a French publication, gives an account of the researches of M. Reynal in regard to the poisonous properties of brine. From a series of experiments detailed, he draws the following conclusions:

First—That three or four months after its preparation, it acquires poisonous properties.

Second—That the mean poisonous dose for a horse is four pints; for the hog, one pint; and for a dog four to five gallons.

Third—That in less doses it produces vomiting in the dog and hog.

Fourth—That the employment of this substance, mixed with the food, continued for a certain time, even in small quantities, may be fatal.

We know from experience, that brine, if swallowed by hogs and other animals, will prove fatal, yet we doubt if the subject is susceptible of the definite results as stated by M. Reynal, for the degree of the poisonous properties of the brine depends on various circumstances. We have known a much less quantity to prove fatal than that stated above.—*Valley Farmer.*

A Canine City.—On the southern arm of the Red river there is a village of prairie dogs, which is no less than 25 miles in length by as many in breadth. It consists of subterranean galleries, sometimes nine feet deep and about five inches wide, and the superstructure is formed of earth thrown up by these curious little animals. Towards the end of October, when these little dogs feel the approach of cold winter, they fasten up all the passages leading to their burrows with straw, then they fall asleep until the return of spring. They are happy little fellows, and if they could speak, they might boast of a city spreading over a greater space than London, and containing a greater number of special inhabitants.—*Scientific American.*

For the New England Farmer.

PRUNE IN WINTER—KILL THE CROWS.

Mr. Editor:—I have long been a subscriber to the monthly *Farmer*, and I frequently find an article which I think worth a year's subscription. I consider it of such value that I have preserved every number to be bound, and yet there is occasionally something taught which seems to me erroneous. One of these is summer pruning of fruit trees. I have followed this teaching for several years; but I constantly noticed the stump would bleed and turn black, and this bleeding in some cases continued several years. Last winter I pruned several trees at different times during the winter, and into March, and the stumps all look healthy, and have not bled a particle. There is no black stripe running down the tree. These facts, with the fact that our fathers pruned in winter with apparent good results, and the fact that grafting is most successful when performed in February or March, with many other reasons which I could adduce, inclines me to think winter the best time for pruning. But this summer pruning, if it should destroy every fruit tree in the land, is a trifling error compared with another, which is, *spare the crows.* I shall be thought extravagant when I say a greater error cannot be promulgated; one more destructive to the interests of our country.

It is a remarkable fact that the great crime of the crows has never (to my knowledge) been presented to the public.

He is the wholesale murderer of smaller birds. In early summer, his business is to watch the birds' nests, and when they hatch he voraciously swallows all the young in a nest for one meal. The result is, that small birds are vanishing away, and, as a natural consequence, grubs, worms, caterpillars, ants, millers, &c., are multiplying at a fearful rate. Should this course continue it is easy to see that the time will come when it will be difficult to raise anything.

Small birds are very scarce now compared with forty and fifty years ago. I should think there are not more than one now to ten at that time, and there are several kinds of small birds which were frequent when I was a boy that I have not seen for years past. I would advise a war of extermination against crows, hawks and owls. I would set the boys to shooting them, and I would also use strychnine. The crows might be exterminated in a few years by feeding them with corn impregnated with strychnine upon the seacoast where they congregate in winter.

Stephen Adams.

West Newfield, Me., Aug. 10, 1861.

Remarks.—We cannot agree with our respected correspondent in either of his propositions.

Wintering Calves.—Calves should have loose stables, or stalls to run in during winter, with a little yard or paddock for exercise out of doors in fair weather, and plenty of air always. Good soft hay, a few oats, say a pint a day for each, or an equal quantity of corn, oats, or barley meal, and in mild weather a quart of sliced roots is their best food. In very cold weather, roots do calves—such is our experience—more hurt than

good. They are cold and watery, and scour them. In mild weather, roots supply the place of green food, and we consider them good for that only, in our Northern climate.

If calves get lousy, rub a little soft greese mixed with a sprinkling of Scotch snuff, on the affected parts, thoroughly to the skin, and the lice will leave at once. If you have not the snuff, grease alone will do. This is effectual, and the only remedy we have applied for years. Tobacco water we do not like. It often sickens the calves, and is not so certain a cure as the grease. Keep the calves warm, dry and clean, and they will come out in the Spring as bright as larks.—*American Agriculturist.*

EXTRACTS AND REPLIES.

HAY CROPS.

I have repeatedly heard the remark that the hay crop of this season is better than it has been for twenty years past. What say you to this? We are apt to magnify objects directly in view, to the perversion of our better judgment. I have noticed many fields that yield a ton or more to the acre; but as a general thing, on well cultivated farms, I believe the crop cannot with propriety be estimated more than one ton to the acre. That is, on a farm where the land for mowing amounts to forty acres, the crop, when gathered to the barn, will not exceed forty tons. If you have observed differently, please state what you have seen? ESSEX.

August, 1861.

REMARKS.—The hay crop, in the New England States, and in northern New York, according to our observation, and the reports which we find in our exchanges, is certainly more than an average one. The average in New England cannot be, we think, more than one ton per acre; but thanks to such intelligent writers and observers as is our correspondent, to the press, and the exertions of our county and State societies, that average, we believe, has been somewhat increased in Massachusetts. The hay crop has certainly been a gratifying one, and it has been secured in admirable condition.

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DAIRY FARMING.

Receiving such satisfactory answers to my former questions induces me to query further. I am anxious to carry on farming in a rather more extensive scale than is commonly done about here, which is generally the skinning process, and my main object is to manufacture all the manure possible on the farm, and still make the stock profitable. I am undecided whether to engage in the milk, butter or cheese business. I can calculate on 17 cents per pound for the butter, and 10 for the cheese, or 2½ cents per quart for the milk at the door. Can you or your correspondents inform me how many quarts of milk it requires to make a pound of cheese? G. H. CROSBY.

East Hampden, Me., Aug., 1861.

REMARKS.—We have seen it estimated that it requires one gallon of new milk to make a pound of curd. When this curd is pressed, there would remain something less than a pound of cheese. We have little doubt that it would be more profitable to make butter and cheese, keep swine on the waste, and increase the manure, than to sell the milk at 2½ cents per quart.

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SOWING OF RED-TOP IN THE FALL—CORN ON OLD AND NEW LAND.

Can you tell me whether it is proper to sow red-top in the fall? I have asked many farmers in this vicinity, and none can give me the desired information. There are two pieces of corn in my neighborhood; part of each piece has been planted for a number of years, the remaining part of each lot was plowed last fall ready for planting this spring; the pieces were manured in the hole with Coe's superphosphate of lime; the ground that had been planted for a number of years did well, but the new ground has done poorly thus far; a great deal of the corn was eaten by the worms in the spring, and what remains will be only fit for fodder. What is the cause of this difference?

Our crops are doing well, and unless something new should turn up, will be good.

J. ELKINS.

Hampton, N. H., Aug. 10, 1861.

REMARKS.—It is a common practice to sow red-top seed in the fall, and it ought to be sowed early, say the last of August, or the first part of September. It will be several days in coming up so as to be readily noticed, as it comes in a single, hair-like stem, of a pale green color. It rarely grows in the first of autumn so as to form a joint.

Corn on sod land is sometimes badly eaten by worms, and where they destroy a portion of the crop the remainder does not seem to flourish well. This is the only thing that occurs to us as the cause of the difference of which you speak.

—

LANDS IN WESTERN NEW YORK.

Will you inform me through the monthly *Farmer*, respecting the unoccupied land in western New York? I understand that there is good land there, but do not know the price per acre. Also, please give a general description of said land: The distance from market, the quantity and quality of the wood, information on the climate and its healthfulness, water, productions and conditions of payment. Any other information which you can give will be very thankfully received. Please give me the name of the land agent, and the place of his residence so I can send him a line, if desirable. A SUBSCRIBER.

North Brookfield, Aug., 1861.

REMARKS.—We wish we were possessed of one-half the knowledge which it seems to be supposed we have. We have no reliable information respecting the lands in question, but will send this paper to our friend and former correspondent, WINSLOW WATSON, Esq., of Port Kent, N. Y.

HERD BOOK—BROOM CORN—POULTRY.

We cannot tell our "Somerset" friend where he can find a "Herd Book" of Ayrshire stock—nor "Subscriber" what broom corn is selling for at present. We can find no mention made of broom corn in the best prices current. Our Waltham correspondent may find the fowls he desires by writing to Levi R. Hewins, Foxboro', Mass.

YOUTH'S DEPARTMENT.

GIVE AS YOU WOULD TAKE.

My bairnies dear, when you go out
With other bairns to play,
Take heed of everything you do,
Of every word you say;
From tricky, wee, mischievous loons,
Keep back, my bairns, keep back;
And aye to all such usage give
As you would like to take.

To twist the mouth and call ill names
Is surely very bad;
Then all such doings still avoid—
They'd make your mother sad.
To shield the weakly from the strong,
Be neither slow nor slack,
And aye to all such usage give
As you would like to take.

A kindly word, a soothing look,
Have ready aye for all;
We are one Maker's handiwork,
He made us, great and small.
We're all the children of His care;
O, then, for His dear sake,
Be sure such usage still to give
As you would like to take.

Nursery Songs of Scotland

A TOUCHING SCENE.

A French paper says that Lucille Rome, a pretty girl, with blue eyes and fair hair, poorly but neatly clad, was brought before the Sixth Court of Correction, under the charge of vagrancy.

"Does any one claim you?" asked the magistrate.

"Ah! my good sir," said she, "I have no longer friends; my father and mother are dead—I have only my brother James, but he is as young as I am. O, sir! what can he do for me?"

"The Court must send you to the House of Correction."

"Here I am, sister—here I am! do not fear!" cried a childish voice from the other end of the court, and at the same instant a little boy with a lovely countenance started forth from amid the crowd, and stood before the judge.

"Who are you?" said he.

"James Rome, the brother of this little girl."

"Your age?"

"Thirteen."

"And what do you want?"

"I come to claim my sister Lucille."

"But have you the means of providing for her?"

"Yesterday I had not, but now I have. Don't be afraid, Lucille."

"O, how good you are, James!"

"Well, let us see, my boy," said the magistrate, "the Court is disposed to do all it can for your sister. But you must give us some explanation."

"About a fortnight ago," continued the boy, "my poor mother died of a bad cough, for it was very cold at home. We were in great trouble. Then I said to myself, I will be an artist, and when I know a good trade I will support my sister. I went apprentice to a brush-maker. Every day I used to carry her half of my dinner, and at night I took her secretly to my room, and she slept in my bed while I slept on the floor. But it appears she had not enough to eat. One day she begged on the Boulevard and was taken up. When I heard that, I said to myself, 'Come, my boy, things cannot last so, you must find something better.'

"I soon found a place, where I am lodged, fed, and clothed, and have twenty francs a month. I have also found a good woman, who, for these twenty francs, will take care of Lucille, and teach her needle-work. I claim my sister."

"My boy," said the judge, "your conduct is very honorable. However, your sister cannot be set at liberty till to-morrow."

"Never mind, Lucille," said the boy, "I will come and fetch you early to-morrow." Then turning to the magistrate, he said: "I may kiss her, may I not, sir?"

He threw himself into the arms of his sister, and both wept tears of affection.

FALSE PROVERBS.

"A young fellow must sow his wild oats." In all the wide range of British maxims there is none, take it for all in all, more thoroughly abominable than this one as to the sowing of wild oats. Look at it on what side you will, and I will defy you to make anything but a devil's maxim of it. Whatever man, be he young, old, or middle-aged, sows, *that* and nothing else, shall he reap. The one only thing to do with wild oats is to put them carefully into the hottest part of the fire, and get them burnt to dust, every seed of them. If you sow them, no matter in what ground, up they will come, with long tough roots like couch grass, and luxuriant stalks and leaves, as sure as there is a sun in heaven—a crop which it turns one's heart cold to think of. The devil, too, whose special crop they are, will see that they thrive, and you and nobody else will have to reap them; and no common reaping will get them out of the soil, which must be dug down deep again and again. Well for you if, with all your care, you can make the ground sweet again by your dying day. "Boys will be boys," is not much better, but that has a true side to it; but this encouragement to the sowing of wild oats is simply devilish, for it means that a young man is to give way to the temptations, and follow the lusts of his age. What are we to do with the wild oats of manhood and old age—with ambition, overreaching, the false weights, hardness, suspicion, avarice—if the wild oats of youth are to be sown, and not burnt? What possible distinction can we draw between them? If we may sow the one, why not the other?—*From "Tom Brown at Oxford."*

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

BLACKBERRY WINE.—To three quarts of blackberry juice, add one quart of water and three and a half pounds of sugar, white or brown. Put it in an open jar, and let it stand two or three days to work; then bottle, and set away in a cool place for a year before using.

BLACKBERRY CORDIAL.—Take any convenient quantity of blackberries, and stew in a preserving kettle for half an hour; then strain, and boil again for half an hour, adding one pound of sugar to each quart of juice, using spices to the taste. When cool, add one gill or more of genuine Cognac brandy to each quart of juice. Then bottle and cork tight.

A CHEAP BEER.—A very good, palatable and wholesome beer may be obtained from acorns and hops. It is slightly sparkling, eminently tonic, and a febrifuge. The acorns are steeped in water for fifteen or twenty days, the water being renewed four or five times; they are then transferred to a cask, hops are added, the cask filled up with water, and the bunghole lightly covered, but not stopped, as there is an escape of gas. In fifteen or twenty days the beer is fit to drink, and as fast as it is drawn off fresh water may be poured on. The cost is less than three pence per gallon. It would supply four or five persons, for eight months, with a very excellent beverage.

NEW WAY OF BOILING FISH.—The addition of a few herbs and vegetables in the water gives a very nice flavor to the fish. Add, according to taste, a little sliced onion, thyme, bayleaf, winter savory, carrots, celery, cloves, mace, using whichever of these ingredients you can procure; it greatly improves skate, fresh haddock, gurnet, &c. Fresh water fish, which have no particular flavor, are preferable done thus, with the addition of a little vinegar. Choose whatever sauces you please for any of the above fish.

GREEN CORN PUDDING.—This is one of the numerous luxuries which the farmer can enjoy with but little expense or trouble. For making it, take twelve ears of green corn, full in the milk and grate it. To this add one quart of sweet milk, one-fourth of a pound of fresh butter, four eggs well beaten, pepper and salt as much as may be deemed necessary. Stir the ingredients well together, and bake in a buttered dish. Some add a quarter-pound of fine sugar, and eat with sauce. This is a fine-flavored and excellent dish, cold or warm, with meat or sauce.

FRIED EGG PLANT.—Cut the plant in thin slices, sprinkle with salt, and let them stand half an hour, pour off the water that the salt extracts, and dry the plant with a towel; beat an egg, dip the plant in it, then roll in cracker, and fry brown in butter. Some prefer simply dipping them in the egg without the cracker, or rolling them in the flour without the egg. Season highly and cook slowly.

BAKED EGG PLANT.—Parboil it until it is soft enough to stick into the meat; then cut it just in half; scoop out the inside, leaving the hull; chop it very fine, and season very highly with pepper and salt, a good deal of butter, and a very little onion, and add crumbs of bread. Mix all well together, and return it into the hull; then strew crumbs of bread on the top, and bake it about an hour. If carefully cooked this is the best way to eat egg plant at dinner.

PICKLING CUCUMBERS.—As a general thing, sufficient care is not taken in pickling cucumbers, and large numbers of them "spoil" in less than three months' time. The following method we think the best: Select a sufficient quantity of the size you prefer, which probably cannot be done at one time. Put them in a stone pot, and pour over them a strong brine; to this add a small bit of alum to secure the color. Let them stand a week; then exchange the brine for clear water, in which they must remain two or three days. Boil the best cider vinegar, and when nearly cool, pour it over the cucumbers, having previously turned off the water. Prepared in this manner with the addition of cloves, allspice, mustard and cinnamon, boiled in the vinegar, pickles of every kind will keep for a year. In pickling cauliflower, tomatoes and other vegetables, which easily absorb the vinegar, the spiced vinegar should be added when cold.

IN LOVE WITH CALICO.

As the "last best gift" are discussing the dress question in the *Rural*, we think the remarks of one of the "sterner sex,"—a young man in Oswego county, who has been inspired by calico,—are worthy of more than a passing notice. Read them and ponder:

Calico dresses are a grand institution. Delaines, silks, and even satins, are good enough in their place—in the parlor or band-box, and all such; but after all the old "stand by," the substantial, is the shilling calico. Care must be taken not to soil the silk; nothing must come in contact with the nice dress that will rumple and stain it; but the calico, that's made for work, and, as the "highfalutins" say, "nobly does it fulfil its mission." Silk rarely finds its way into the realities of life; that is, into the kitchen at home, or into the hut of the suffering abroad. But calico. O, what rich meals we get by it; how it cheers the suffering as with its bright colors and cheerful presence it stands with soft hand ministering to our distresses.

Calico seems to be always more willing and ready to give to want than silk. It is a curious fact of our nature, that the nicer our dress the harder our heart is, as if when dressed in silk we changed our natures, and rose above base, worldly things. What! our silk dress be seen near enough to that poor woman to give her assistance, or drabbling into a dirty hut? No, never! Calico might do it; silk, it's just impossible.

But when in addition to all, Calico comes in, rosy with the exercise of kitchen duties which it knows how to do so well, and loves to do so dearly, and sits down to the piano or melodeon, and makes the liquid melody flow sweetly forth; aye, even blending its own sweet voice with the music of the instrument, then we appreciate Calico."—*Rural New-Yorker.*